FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

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More Observations On FDA Policy Statement Outlined

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Coming from Food and Drug Administration sources and others this week were some further observations concerning the FDA policy statement on the status of certain veterinary drugs under the Delaney amendment to the food additives law.

This amendment deals with substances said to be capable of "inducing cancer when ingested by man or animal."

No specific products were mentioned in the statement issued last week, but estrogens and arsenicals were said to be involved because of certain laboratory animal and other data. (Feedstuffs, May 30.)

It was indicated this week that there had been no changes in regard to the policy statement or its effects on the feed industry, and it was not clear what any further moves there might be in regard to the broad policy statement.

As explained previously, the FDA statement does not rule out use of

(Turn to DRUGS, page 8)

Abbott Makes Statement on Arsenical Status

NORTH CHICAGO, ILL. — Abbott Laboratories, in a statement issued this week, declared there is "no evidence whatsoever" that arsanilic acid has caused cancer either in man or in animal.

The Abbott statement was issued in connection with a Food and Drug Administration policy statement—and interpretations of that statement—on veterinary drug ingredients under the Delaney amendment to the food additives law.

Abbott termed "astonishing" the reported comment of an FDA spokesman indicating that no future clearances will be granted to animal feed preparations containing arsenicals. (Feedstuffs, May 30.)

The statement charged that this "sets a precedent whereby an entire class of chemical products, known and unknown, is prejudged and condemned."

"Abbott Laboratories has always had the deepest concern for the public health," the Abbott statement said. "If Abbott had evidence that arsanilic acid is carcinogenic, the product would not be marketed. We know of no such evidence either from our own research or from the world's scientific literature. Therefore, we are continuing to market arsanilic acid."

Following is the text of the Abbott statement:

"We have studied the statement of

(Turn to ABBOTT, page 109)

FEEDSTUFFS *Features This Week*

BEEF NUTRITION: "Effect of Plane of Nutrition on Performance of Beef Cows" is the title of an article on **page 18.**

PELLETING: How the trend toward complete pelleted feeds influenced the design and operation of a new feed plant in Iowa is told on **page 28.**

DEALER STORY: How an Ohio dealer shifted his service to meet customer demand and improve sales is reported on **page 33.**

MILLING SEMINAR: A feed manufacturer-sponsored seminar for dealers on milling operations is described on **page 70.**

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AFMA Issues Statement on Additive Law

CHICAGO—The American Feed Manufacturers Assn. this week released a set of AFMA recommendations regarding interpretation and enforcement of the 1958 food additives amendment to the Federal Food, Drug and Cosmetic Act.

The AFMA statement was approved by the association's board of directors at a May 11 meeting and was issued this week in connection with an AFMA bulletin dealing also with the Food and Drug Administration's recent policy statement dealing with the Delaney amendment to the food additives law.

Among other things, the AFMA statement said: "Moderate and temperate enforcement of this new amendment can spark great scientific development whereas tough enforcement can stifle the progress of animal agriculture, public health and food production . . . In cases where well established drugs, after thorough investigation, have been cleared and widely used in feeds prior to the food additives amendment of 1958, such clearance should not be revoked unless experience shows that serious

(Turn to AFMA, page 105)

Cites Need for More Clarification; Meeting Planned

CHICAGO—The need for further clarification of the status of certain veterinary drug ingredients under Food and Drug Administration policy was noted in a bulletin issued this week by the American Feed Manufacturers Assn.

At the same time, it was indicated that tentative plans were being made for a meeting between FDA and industry representatives.

Referring to FDA's policy statement dealing with the Delaney amendment to the food additives law, the AFMA said: "It is the considered opinion of many that there are inconsistencies in the FDA statement as released that now place FDA and the pharmaceutical and feed industry in an untenable position. This situation must be resolved."

The bulletin also said dates were being arranged for a conference with FDA's department of pharmacology to compare data on which industry and government are basing their respective positions on these problems. Both the feed additive suppliers and the feed industry will be prepared to present a strong case to substantiate their position, said AFMA.

Feed Man-Vet Cooperation Urged at Central Meeting

By FRED TUNKS
Feedstuffs Staff

MILWAUKEE—Feed men and veterinarians "working together at the grass roots level" was considered here this week at the 34th annual convention of the Central Retail Feed Assn. as the key to erasing most, if not all, of the differences which exist between the two groups.

Improving feed industry-veterinarian relationships through a better knowledge of each other's problems and responsibilities were promoted in talks by Dr. Morris Erdheim, a veterinarian and manager, department of technical services and development, Dawe's Laboratories, Inc., Chicago, and Dr. Rolland Anderson, Elkhorn, Wis., a practicing veterinarian, a member of the council of veterinary science of the American Medical Assn. and a past president of the Wisconsin State Veterinary Medical Assn.

Their talks, which brought forth questions from the floor, were featured during one of several program sessions attended by some 600 feed dealers, and representatives of manufacturers and allied groups in the feed industry.

(Turn to CENTRAL, page 109)

Asks FTC to Study Poultry Situation

WASHINGTON — Rep. Charles Brown (D., Mo.) announced this week that he was asking the Federal Trade Commission to look into the possibilities of "action directed toward preventing monopoly conditions in the poultry industry."

Rep. Brown is chairman of a poultry industry sub-committee of the House Small Business Committee which investigated the broiler and allied industries two years ago.

Announcement of the request to FTC was part of a series of press releases and copies of correspondence which were released this week by Congressman Brown. All related to the current low poultry product prices.

Rep. Brown said he was referring poultry industry questions to FTC after receiving a statement from the Department of Justice indicating that "it does not appear that the growth of integration and contract-growing raise substantial questions under the Sherman (anti-trust) Act."

In one press release, the congressman said: "The poultry sections of this nation are doomed to depression because the Department of Agriculture has turned a deaf ear to the family farmers' pleas for emergency relief . . . Before long, the growers will be joining unions to get better working conditions from the agri-business managers . . . Agri-business promoters now have a free rein to take over the rest of the poultry business, just as they gained control of the broiler business. Thousands more family farmers will be forced to become 'contract coolies' on the agri-

(Turn to POULTRY, page 105)

USDA TO BUY FROZEN EGGS

WASHINGTON—The U.S. Department of Agriculture this week announced that it would begin buying frozen eggs in efforts to help ease the severe problem of low egg prices.

The frozen egg buying program, it was explained, will supplement the previously existing program of making weekly purchases of dried eggs. The frozen eggs will be stored for drying later in the year because drying plants are already operating at capacity, officials said. The dried eggs are donated to the school lunch programs, welfare organizations and needy persons.

The purpose of the program, said USDA, is to help producers during the big production season while prices continue at low levels.

Poultry groups have urged USDA to increase egg buying and also purchase laying hens to cut down on production. The proposal to buy hens has been rejected.

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Top of the Hopper

FURTHER CLARIFICATION of the Food and Drug Administration's policy statement concerning use of certain veterinary drugs (Feedstuffs, May 30) is necessary, the American Feed Manufacturers Assn. states in a circular to members this week. AFMA holds that "it is the considered opinion of many that there are inconsistencies in the FDA statement as released that now place the FDA and the pharmaceutical and feed industry in an untenable position. This situation must be resolved."

There can be no argument with this conclusion. Clarification must come, and it must come in a reasonably short time. Scientific facts must be assembled and presented to FDA officials and at the same time the legal aspects of the situation should be closely scrutinized. If changes in the law upon which FDA's actions are based are necessary, the industry should be prepared to push for such changes. It is almost too obvious to state, but at the crux of the matter is the fact that the industry in no shape, manner or form, wishes to endanger the food supply and it is as interested in proper safeguards as is the FDA. The scientific resources of the industry are dedicated to this principle as much as they are to production of food in the most efficient manner possible. As we say, this is an obvious fact, but it is one which must be kept in mind.

Progress in scientific feeding must not be stalled on a legal hump, and if a road grader is required to smooth the route the rake should be discarded.

Steps to tackle the problem are under way. AFMA reports that tentative dates are being arranged for a conference with the FDA's department of pharmacology to compare data on which industry and government are basing their respective positions. "Both the feed additives suppliers and the feed industry will be prepared to present a strong case to substantiate their positions," AFMA says.

Of some significance is the fact that FDA has sent to Congress a color additive bill accompanied by a suggestion that prompt action is needed to save the drug and cosmetic industries from losing vitally-needed colors which face removal from the FDA's approved list. Certain colors, it is reported, are under suspicion as being unsafe for cosmetic use, and the bill submitted would give FDA some discretionary authority to handle approval of colors if found safe for human use. A similar approach to the feed industry's problems merits examination. Agriculture and the feed industry deserve as much attention as lipstick.

AN INTERESTING COMPILATION of figures on broiler production has been worked up by Arthur Gannon, Georgia extension poultryman. It shows very pointedly the state-by-state trends. For example, Georgia, North Carolina, Alabama, Mississippi, Maine, Tennessee and Kentucky more than doubled their broiler production between 1953 and 1958. Alabama made the most phenomenal increase, growing out more than 3.5 times as many birds in 1958 as in 1953 and jumping from eleventh to fourth place behind (in order) Georgia, North Carolina and Arkansas.

Alabama production was well below Georgia's 292-million-bird production but at 131.6 million it nudged close to third-runner Arkansas' 133.3 million and North Carolina's 134.6 million. Ten states showed a decrease in production, including California, off 2% and down in rank from eighth place in 1953 to eleventh in 1958. The biggest percentage decline, 52%, was made

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How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Another week of spotty demand prevailed in the formula feed industry. Hog and turkey areas had the most favorable volume, while the dairy and broiler areas continued to experience slow demand. It was reported that mills without contractual feeding arrangements of some kind are showing the poorest volume. Prices continued downward, and buying of feeds was reported to be almost entirely on a hand-to-mouth basis. The U.S. Department of Agriculture reported this week that the May egg-feed ratio at 6.7 was the lowest since 1954. The index of wholesale feedstuffs prices showed another decline, dropping 1.2 points to 78.2. It was 79.9 a year earlier. The feed grain index was up very slightly to 70.5, compared with 72.5 a year ago. (Ingredient prices in detail on pages 106-108.)

Northwest

"If the chick starter and egg feed business were fairly close to normal, we'd be having a tremendous year," a feed mill representative reported this week. "Without it, we're running a little ahead of a year ago."

He and most other feed mill representatives reported a slight improvement in business during the past few days. The picture is still somewhat spotty, however, as some slowdowns in demand were also noted.

The week's increase was in hog and turkey feeds. Turkeys are getting larger, as are pigs, and it is reported that swine raisers have been pushing this spring to beat the price decline late this summer.

Some increase in broiler feed demand was also reported. Starter feeds haven't done much this spring, and egg feeds showed another cut this week for some mills. It is believed that small flock owners who intend to last out the low egg prices this summer are using up grains on the farm.

Dairy and cattle feeds have fallen off very sharply.

Over-all volume for mills is running about even or slightly ahead of last May and June, which were record-breakers for many mills. One mill reported May about 10% over a year ago and the June pace about 15% over last year.

Prices will be down again slightly next week, primarily in high protein feeds. It is reported that dealers and feeders are buying hand-to-mouth in the down market, as expected, and that volume may soon show a good spurt when the ingredients market stabilizes.

Southwest

Sales volume of formula feed in the Southwest this week is holding its own compared with a week earlier, but it has failed to show any substantial pick-up. Mill running time ranges from 4 to 5 days. Some mills are operating normal crews on normal shifts while others have kept the operating time about the same by using less manpower. There are variations with individual mills, but generally no plant is having trouble keeping up with the orders, which seem to come in spurts.

Mills that do not have contractual feeding arrangements of some kind seem to be reporting the poorest volume. This is particularly true for chick starter and growing feeds, leading to the conclusion that countless farmers who formerly maintained backyard chicken flocks have left the egg production to the commercial producers. Others who have laying hens now are using a minimum of feed because of the low egg prices.

Turkey feed volume is increasing seasonally. Poults are still being put down and those down are growing bigger. Broiler rations continue to move in about the same quantity although there are signs that there has been a cutback in placements which will lead to a reduction in this business.

Hog feeds are setting the pace for most mills, though some sales departments note there has been a slight decline, probably, they believe, because hogs have been turned onto lush pastures along with cattle.

Feed buying is all on a hand-to-mouth basis, feeders and dealers being reluctant to stock up on a downward market.

Price lists for next week are expected to be unchanged to down $1 on some items.

Northeast

The trade had hoped for a pickup after the holiday, but sales continued at a slow pace and there is nothing on next week's horizon to indicate any improvement.

Eggs were a little firmer and from here on in the outlook may be better. Broiler prices held unchanged.

There still was some dairy feed business, but not much. Pastures are in good shape and it would take a prolonged hot, dry spell to perk up dairy feeds.

Egg mashes remained the trade's breadwinner, but growing feeds are assuming increasing importance and turkey feed volume is mounting because more poults are being put in.

Ingredient prices, reflecting the waning dairy season, were mostly on the downside.

Corn was off about 1¢. Oats, however, were firm and up 1¢ on reports of crop damage from insects and difficulties in moving the grain down the lake. Barley was off 2 to 3¢.

Animal tallow weakened a little and edged ⅛¢ lower.

Soybean oil meal (44% and 50%) eased 50¢. Linseed oil meal declined $1 to $2 on general offerings. Gluten meal held unchanged.

Fish meal declined $2 to $3 but meat scraps held steady. Gluten feed, distillers' grains and hominy meal were unchanged. Brewers' grains held about steady and alfalfa meal dropped $1.50 to $2.

Millfeeds again declined as supplies exceeded demand.

Running time of formula feed manufacturers averaged 32 to 36 hours last week, with one mill down to 24 hours.

Southeast

All types of feed business in the Southeast were reported this week to be on the slow side. Sellers of feed ingredients report that most buyers for feed mills have heavy stocks on hand and are not interested in buying any large tonnages for future months. Most of the feed mills manufacturing broiler feeds will only buy alfalfa meal on a week-to-week basis. Fish meal is reported to be backing up at some of the producing mills on the Gulf.

The Agricultural Marketing Serv-

(Turn to MARKETS, page 111)

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ADA American Dehydrators Association

PASTURE IN THE BAG

ARKANSAS
Blytheville—Rich Land Products Co.
Driver—Lowrance Bros. & Co., Inc.
Hughes—Blanton-Horseshoe Mlg. Co.

CALIFORNIA
Chowchilla—Sears Alfalfa Mill, Inc.
Dixon—Dixon Dryer Co.
Firebaugh—V. C. Britton Co.
Madera—Madera Milling Co.

COLORADO
Greeley—Monfort Feed Lots, Inc.
McClave—The Reyher Mlg. Co.
Milliken—Colorado Alfalfa Products Co.
Pueblo—American Alfalfa Dryers, Inc.
Sterling—Sterling Alfalfa Products Co.
Wiley—Arkansas Valley Alf. Mlg. Co.

ILLINOIS
Auburn—Auburn Dehydrating Mills, Inc.
Beardstown—Arnold Mills
Roanoke—Prairie Dehydrating Co.

INDIANA
Fort Wayne—T. E. White Co., Inc.
New Paris—Dwiggins Alfalfa Mills
Vincennes—Chas. H. Schenk & Sons

IOWA
Avoca—Avoca Alfalfa Mlg. Co.
Burlington—Middletown Mills
Conrad—Green Products Co.
Grinnell—Lang's Alfalfa Farms
Iowa City—Iowa Valley Mlg. Co.
Lake Park—Arco Dehydrating Co.
Sloan—Wraybill Dehydrating Co.

KANSAS
Abilene—Abilene Alfalfa Mills, Inc.
Belvue—Peddicord Alfalfa Milling Co.
Eureka—E. C. Small Alfalfa Products
Lawrence—Ramsey Dehydrating Co.
Maize—Bert & Wetta Sales, Inc.
Manhattan—Eureka Lake Alfalfa Co., Inc.
Oxford—L. E. Chamberlain Co.
Oxford—Oxford Dehydrating Co.
Solomon—Solomon Dehydrating Co.
Topeka—Jones Alfalfa Milling Co.
Topeka—Kaw Dehydrating Co., Inc.
Topeka—Progress Products Co.
Topeka—Thompson Dehydrating Co.
Wamego—R. W. Milling Co.

LOUISIANA
Bossier City—Caplis Farm Dehy. Co.

MARYLAND
Worton, Kent County—Andelot, Inc.

MICHIGAN
Erie—Erie Alfalfa Mills, Inc.

MINNESOTA
Bird Island—Rural Dehydrators
Crookston—Red River Alfalfa Co.
Le Center—Le Center Alfalfa Dehydrating Co.
Olivia—Northern Drying Co.
Owatonna—Wildung Alfalfa Mill
Swift—Landby Dehydrating Co.
Worthington — Worthington Dehydrating Co.

MISSOURI
Hannibal—Marion County Mlg. Co.
Henrietta—Missouri Valley Dehydrating Co.
Kansas City—Alfalfa Division, Archer-Daniels-Midland Co.
St. Louis—Cypress Land Farms Co.
Wakenda—Reimer Dehydrating Plant

MONTANA
Belgrade—Belgrade Alfalfa Mills

NEBRASKA
Albion—Albion Alfalfa Mill, Inc.
Columbus—Al-Fa Meal Co.
Cozad—Haymaker Feeds, Inc.
Cozad—Nebraska Farm Products, Inc.
Dakota City—Beermann Bros. Dehy
Fremont—Dehy Alfalfa Mills, Inc.
Fremont—Skyline Mills, Inc.
Glenvil—Glenvil Alfalfa Mill
Gothenburg—Gothenburg Feed Products Co.
Gothenburg—Hanna & Lamb Mlg. Co.
Gothenburg—M & R Milling Co.
Grand Island—Cornhusker Farms
Hastings—Morrison & Quirk
Kearney—Kearney Alfalfa Mills
Laurel—Green Glow Mills, Inc.
Lexington—Central Alfalfa, Inc.
Lexington—Dawson County Feed Products, Inc.
Lexington—Nebraska Alfalfa Farms, Inc.
Lexington—Platte Valley Products Co., Inc.
Mead—Mead Alfalfa Milling Co.
Mindon—Trico Feed Mills
Nickerson—Transco Feed Products, Inc.
Oakland—Burt County Mills, Inc.
Oakland—Dehydrated Products Co.
Odessa—Shofstall Milling Co.
Schuyler—F. J. Higgins Mlg. Co.
Scribner—Ebel Alfalfa Co.
West Point—West Point Feed Products Co.
Willow Island—Lemmon Mills
Wisner—Albers Dehydrating Co.
Wood River—Harlan County Alfalfa Mill

NORTH CAROLINA
Wake Forest—The Welles Co.

NORTH DAKOTA
Minot—Big Sky Dehy., Inc.

OHIO
Columbus—The Farm Bureau Coop. Assn., Inc.
Graytown—Rohloff Bros., Inc.
New Bavaria—Schwab Bros. Mills, Inc.
Oak Harbor—Hayward, Inc.
Perrysburg—B & R Mills, Inc.
Toledo—The A. B. Caple Co.

OKLAHOMA
Dewey—Dewey Alfalfa Dehy. Co., Inc.
Muskogee—Choska Alfalfa Dehy. Mills
Muskogee—Cole Grain Co.
Shawnee—Waldo Alfalfa Mlg. Co.

PENNSYLVANIA
Allentown—Trexler Farms
Nazareth—Keystone Dehydrators

SOUTH DAKOTA
Vermillion—Sioux Alfalfa Meal Co.

TENNESSEE
Tiptonville—Reelfoot Alfalfa Mill

TEXAS
Danbury—Jack Garrett
Garwood—Garwood Dehydrating Co.
Hearne—Brazos Valley Dehy. Co.
Hearne—Plantation Dehy. Co.
Raymondville—Evergreen Farms, Inc.
Sherman—Grayson Alfalfa Dehydrating Mills
Sugar Land—Sugarland Industries, Inc.
Trinidad—Cedar Creek Dehydrating Co.
Vernon—Greenbelt Dehydrating Co.
Waco—Waco Alfalfa Dehydrating Co.

WASHINGTON
Burlington—Chris Knutzen & Co.
Mount Vernon—Pierson Dehydrating Co.
Mount Vernon—Skagit Dehydrating Co.
Snohomish—McKennon Dairy Farms, Inc.
Sunnyside—Roza Dehydrating Co.

WISCONSIN
Fountain City—Greshik Dehydrated Alfalfa Mill
Oakfield—Mammoth Springs Canning Co.

WYOMING
Casper—Natrona Feed Products Co.

CANADA
Chilliwack, B. C.—Springbank Dehydration, Ltd.
Renfrew, Ont.—Ottawa Valley Grain Products, Ltd.
Schomberg, Ont.—Schomberg Alfalfa Co., Ltd.
Ste. Rosalie Jct., P.Q.—Societe Coop. Agricole de Sainte-Rosalie
Vancouver, B. C.—Buckerfield's, Ltd.
Wallaceburg, Ont. — Greenmelk Co., Ltd.

ISRAEL
Tel Aviv—Milfal Aspeset

ITALY
Rome—Federazione Italiana Dei Consorzi Agrari

FRANCE
Herqueville par Saint Pierre—Jean Renault

ENGLAND
Stokes Ferry—Crouch Dehydrators, Ltd.

FEED ADVERTISING CONFERENCE—Listening to and taking part in a discussion of the formation of feed advertising organization at a meeting in Des Moines called by the Midwest Feed Manufacturers Assn. are (from left): Front row—Dell Miller, Supersweet Feeds, Des Moines; Bob Buckley, Wesley Day & Co., Des Moines; Vernard Lundin, Hubbard Milling Co., Mankato, Minn., and Harvey Bergren, Pay Way Feed Mills, Kansas City, Mo.; second row—Dave Seibel, Rath Packing Co., Waterloo, Iowa; Ray Gould, Dannen Mills, Inc., St. Joseph, Mo.; Jack McClaren, Fairall Agency, Des Moines, and Dr. LeRoy Hansen, Foxbilt, Inc., Des Moines; back row—Jack Dow, Dow Agency, Omaha; Bill Cook, Walnut Grove Products Co., Atlantic, Iowa; Roger Johnson, Roger Johnson Advertising Agency, Des Moines, and Bob Engesether, Hubbard Milling Co.

Organizing Group Of Feed Ad Men

DES MOINES — A temporary organization, with committees in four specific fields, was formed recently here at an advertising conference called by the Midwest Feed Manufacturers Assn. to develop a permanent group of feed advertising men with the purpose of "working together in solving mutual problems and more effectively promote the feed industry and its products."

Vernard E. Lundin, director, advertising and public relations, Hubbard Milling Co., Mankato, Minn., was elected temporary chairman of the group which voted to call another larger gathering of feed advertising men for June 30 at Kansas City to formulate a report for the entire group. This meeting has been set for 9:30 a.m. in room 229 of the President Hotel.

The organization's four committees are on organization, current feed advertising, dealer advertising and public relations.

The initial meeting of feed advertising men held May 29 in Des Moines at Fort Des Moines Hotel was called to order by Lloyd S. Larson, MFMA executive vice president. He said the idea of calling feed advertising men together had been considered for several years and noted that the Industry-College Conference set for Sept. 17 at Iowa State College, Ames, had been planned around the theme of "Advertising and Promotion — Let's Do It Right in the Best Interest of Feeder-College-Feed Industry."

Mr. Larson expressed the opinion that "there was need for those in the feed advertising profession to formulate the position advertising should take in that conference."

No Code of Ethics

It was reported that a preliminary check with Advertising Age and the Federal Trade Commission revealed there is no code of ethics for feed advertising as there is for a few products such as tires and cigarettes.

"There is need for an organization now to avoid difficulty for feed manufacturers who might unknowingly walk into trouble with federal regulations," Mr. Larson said.

Hugh Kelley, Des Moines, charter member and past president of MFMA, said he dated back in the feed business "to the time when its reputation was pretty rotten, when it was generally felt the feed manufacturer was in business to cheat and when it was believed he had to fool everybody to sell his product.

"During those years," Mr. Kelley said, "the feed industry developed a defensive attitude and it took a long time to go on the offensive. Finally, we were able to convince the feeder we had something he needed, that we were out to help him improve his farming operation."

He said he feared that "some federal bureau created by 'two-bit' politicians was a real threat to the industry and that Food and Drug regulations already were pressing the feed industry into narrower channels."

The MFMA, he said, was known for innovations. He cited as examples the Midwest Production School, the college-industry program at Iowa State College, the Colorado college-industry program and organized press conferences "to bring the feed indus-

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K. N. Wright Appointed A. E. Staley Nutritionist

DECATUR, ILL. — Kenneth N. Wright has been appointed director of nutrition in the formula feed department of the A. E. Staley Manufacturing Co., Decatur, announced E. E. Rhodes, soybean division manager. He succeeds Dr. W. N. McMillen, who resigned to develop a private hog breeding enterprise.

Kenneth N. Wright

Mr. Wright has been associated with animal nutrition work for 18 years. He received his bachelor's and master's degrees at the University of Illinois, where he was a staff member in animal husbandry and nutrition before joining Staley's in 1946.

As poultry biological technician and research chemist in animal nutrition, he did early development work with "Hi-Pro-Con" 50% protein dehulled soybean oil meal.

Mr. Wright was U.S. representative as poultry nutrition specialist at the International Agricultural Fair at Palermo, Italy, in 1957.

In addition to his research work, he has worked with feed manufacturers on nutrition and consultation as A. E. Staley feed nutritionist since 1953.

Dr. McMillen, who has been director of nutrition since 1951, will continue his association with the firm on an independent consulting basis, Mr. Rhodes said.

As a sideline in recent years, Dr. McMillen has been developing four special black strains of hogs for crossing and has evolved a new technique by which hog producers can develop their own uniform crossbred or hybrid species using the four basic strains. The strains, developed for the most part on breeding farms in the Decatur area, have been given the trade name "Red Meat Hogs" by Dr. McMillen.

Miles Laboratories Forms New Company In Feed Field

ELKHART, IND. — A major corporate realignment encompassing the formation of a new company in the livestock feed field, was announced this week by Miles Laboratories, Elkhart.

The new organization has been named the Miles Chemical Co. and is one of four main divisions of the parent corporation. It consolidates into one company the Sumner Chemical Co., Zeeland, Mich., maker of organic chemicals; Takamine Laboratory Division, Clifton, N.J., manufacturer of industrial enzymes and citric acid production, Elkhart, Ind.

In the past, Takamine has been a part of the livestock feed industry through the sale of enzymes for liquefication of proteins. Present plans call for increased activity in this area.

H. F. Roderick, President

Howard F. Roderick has been named president of the new company. Mr. Roderick joined Miles Laboratories in January, 1959, as vice president and most recently was named to the board of directors.

Administrative and marketing headquarters under the new arrangement will be in Elkhart.

In making the announcement, Walter R. Beardsley, president, Miles Laboratories, said, "The move is being taken at this time to insure optimum efficiency, both internally and externally. The anticipated growth of this division, coupled with the complexity and variety of its products, is bringing about the need for a high degree of autonomy.

"By establishing Miles Chemical Co., we will be better able to achieve a higher concentration on the part of management for the specialized activities in this area. At the same time we are combining these varied chemical procedures under a single, experienced administrator."

Prior to joining Miles Laboratories, Mr. Roderick was vice president of International Minerals & Chemical Corp., Chicago, and was director of research and later director of sales for Wyandotte Chemical Corp. He holds a B.S. degree in chemical engineering from the University of Michigan.

Immediate Goals

Mr. Roderick said immediate goals under the new arrangement will be the establishment of an integrated sales force and research and product development programs. He said long-range planning includes expansion into international production, additional acquisitions and moves into new markets.

Sumner Chemical was acquired by Miles Laboratories in 1946 and Takamine in 1956. Miles pioneered the development of a submerged fermentation process for producing citric acid and erected a plant in Elkhart which began operations in 1952. Currently a $3.6 million expansion program is under way which, when completed in the fall of 1959, will enable Miles to more than double its present output of citric acid, officials said.

The Sumner and Takamine names will continue to be used in connection with their products for an indefinite "transitional" period, according to Mr. Roderick.

Chicago Feed Club Event Set June 16

CHICAGO — The Chicago Feed Club has announced that its Golf and Field Day will be June 16 at the Woodridge Golf Club, Lisle, Ill.

Tee-off time has been set for 10 a.m. to 1 p.m. There will be separate programs for golfers and non-golfers, with both including refreshments, entertainment and prizes.

A floor show is to be staged at 9 p.m. following a 7 p.m. dinner.

Urged to Put Dried Eggs in Feeds

LEWISBURG, TENN.—A Tennessee hatcheryman recommends that the feed firms buy dried eggs and include them in feed in efforts to help support egg prices and thereby help egg producers.

In a letter to Feedstuffs, W. H. Cochran of Cochran Poultry Farm, Lewisburg, Tenn., said: "If the feed milling industry, as a unit, would go on the market and buy a few pounds, or maybe a few hundred pounds, of powdered eggs and work them back through its poultry feed as a protein supplement and source of other elements, it would save the egg producing phase of the poultry industry and make the milling industry money. As it stands today, there are a vast number of egg producers on the verge of bankruptcy who will go over the cliff unless relief comes soon. The milling industry stands to lose heavily from decreased feed volume and unpaid feed accounts. Therefore, I say, let's use and not lose."

Cooperative Buys Property for Mill

PORTLAND, ORE.—The Washington Farmers Assn., a division of the Washington Farmers Cooperative Assn. of Seattle, has completed the purchase of property in Portland for the building of a feed mill, storage facilities and warehouse space.

This mill, plans for which were announced previously, will be the first plant built in Oregon by the cooperative, although it has previously purchased poultry processing plants. Plans are now being made for early construction of the feed mill.

Dehy Firm Purchased

KANSAS CITY—The Al-Fa Meal Co., Columbus, Neb., has purchased the David City (Neb.) Alfalfa Co. Both firms are dehydrators of alfalfa meal.

Vit-A-Way Names General Manager

FT. WORTH—The appointment of Frank J. Anderson as general manager of Vit-A-Way, Inc., Ft. Worth, has been announced by Leo Potishman, president of the company which manufactures a line of patented mineral-vitamin fortifiers and supplements.

Mr. Anderson, a native of Canada, has spent more than 25 years in the grain and feed industry in Canada and the U.S. Since 1947, he has been related to the grain and feed business in Minnesota, Colorado and California. His experience has covered purchasing, sales, sales management, nutrition, advertising, public relations, elevator management and feed plant management.

Frank J. Anderson

Farm Commodity-Feed Price Ratios

	U.S.	New Eng.	Mid-Atl.	East North Cent.	West North Cent.	South Atl.	East South Cent.	West South Cent.	Mount.	Pac.
CHICKEN-FEED—										
Farm Chickens:										
May, 1959	3.3	3.3	3.8	3.3	2.7	3.5	3.6	3.1	3.5	3.5
April, 1959	3.7	3.4	4.2	3.7	3.5	3.2	3.1	3.1	3.9	3.4
May, 1958	4.8	5.0	5.2	5.1	4.6	4.4	4.3	4.1	4.4	4.1
Average (1948-57)	5.7									
Average (May, 1948-57)	5.9									
Broilers:										
May, 1959	3.3	3.4	4.2	3.6	3.5	3.2	3.1	3.1	3.6	3.5
April, 1959	3.3	3.4	4.2	3.7	3.5	3.2	3.1	3.1	3.9	3.4
May, 1958	4.0	4.2	4.6	4.4	4.4	3.8	3.8	4.0	4.4	4.3
TURKEY-FEED—										
May, 1959	6.5	6.6	7.8	6.5	7.0	6.0	6.9	6.1	6.9	5.9
April, 1959	6.7	6.6	8.1	6.6	7.0	5.8	7.3	6.1	7.0	6.2
May, 1958	7.7	7.8	8.3	7.9	9.1	7.2	7.0	6.7	..	6.9
Average (1948-57)	8.6									
Average (May, 1948-57)	8.2									
EGG-FEED—										
May, 1959	7.3	8.7	7.5	6.9	6.7	7.9	8.2	7.4	8.0	6.7
April, 1959	8.2	10.0	8.8	7.8	7.4	9.1	9.0	8.1	8.7	7.7
May, 1958	10.1	11.2	10.5	9.9	10.4	9.7	10.1	10.2	10.3	9.4
Average (1948-57)	11.1									
Average (May, 1948-57)	9.7									

	U.S.	North Atl.	East North Cent.	West North Cent.	South Atl.	South Cent.	West
MILK-FEED—							
May, 1959	1.27	1.16	1.23	1.41	1.51	1.35	1.29
April, 1959	1.31	1.22	1.23	1.38	1.57	1.37	1.33
May, 1958	1.26	1.20	1.22	1.41	1.48	1.35	1.34
Average (1948-57)	1.29						
Average (May, 1948-57)	1.13						
BUTTERFAT-FEED—							
May, 1959	24.5	...	19.9	27.1	...	16.2	18.4
April, 1959	24.6	...	19.4	26.6	...	15.9	18.6
May, 1958	23.3	...	19.5	26.5	...	16.0	19.2
Average (1948-57)	21.3						
Average (May, 1948-57)	22.0						

	U.S.	North Cent.
HOG-CORN—		
May, 1959	13.5	13.8
April, 1959	13.8	14.2
May, 1958	18.3	18.8
Average (1948-57)	13.4	13.7
Average (May, 1948-57)	13.0	13.4

NOTE: Ratios computed at mid-month by U.S. Department of Agriculture. Ratios represent number of pounds of poultry feed equal in value to 1 lb. live farm chicken, turkey or 1 doz. eggs; pounds broiler growing mash equal to 1 lb. broiler; pounds concentrate rations equal to 1 lb. milk or butterfat; bushels of corn equal to 100 lb. hog. Increases in ratios are favorable to the feeder.

KEY TO GEOGRAPHICAL DIVISION

Here is a guide to the states included in the geographical divisions listed in the accompanying commodity-feed price ratios:

New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Mid-Atlantic: New York, New Jersey, Pennsylvania.

North Atlantic: New England and Mid-Atlantic states combined.

East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

North Central: Combination of the two foregoing.

South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central: Kentucky, Tennessee, Alabama, Mississippi.

West South Central: Arkansas, Louisiana, Oklahoma, Texas.

South Central: Combination of the two above.

Pacific: Washington, Oregon, California.

Mountain: Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Montana.

West: Combination of the two above.

Egg-Feed, Other Ratios for May Below Year Ago

WASHINGTON—The U.S. Department of Agriculture this week reported that the May 15 index of prices received by farmers for poultry and eggs was 7% below the April 15 index—the lowest since 1941.

With the cost of the poultry ration increasing slightly during the month and egg prices declining, the egg-feed price ratio dropped to 7.3 compared with the record low of 7.2.

Most all other May farm commodity-feed price ratios also were at a slightly lower level than for the same date a month earlier and for the most part were even farther below commodity-feed ratios of a year ago.

Prices for farm chickens fell 10% during the report month to 11.4¢ lb. —the lowest since separate estimates for farm chickens were started in 1940. The May farm chicken-feed ratio was 3.3 compared to April's 3.7 and the May, 1958, ratio of 4.8. The 1948-57 average was 5.7.

Lower prices for commercial broilers and for turkeys also showed up in ratios. Last month's broiler-feed ratio of 3.3 was the same as April's, which was below the May, 1958, figure of 4.0. May's turkey-feed price ratio of 6.5 was just under April's 6.7.

A continued seasonal decline in the average price received by farmers for milk sold wholesale to plants and dealers was primarily responsible for the 3% drop in this index.

The milk-feed ratio slid to 1.27 by mid-May from April's 1.31, but it was still above the May, 1958, ratio of 1.26.

The average price for butterfat in cream declined 1%, USDA reported, and milk retailed by farmers was unchanged during the month ending May 15, both slightly higher than a year earlier. At mid-May the butterfat-feed price ratio stood at 24.5, just barely below the 24.6 ratio registered a month earlier and still well above the May, 1958, ratio of 23.3 and the 1948-57 average of 21.3.

The hog-corn ratio for last month was 13.5, compared to 13.8 the month before. A year ago the hog-corn ratio was at 18.3.

While other prices received by farmers were generally lower, lambs averaged $1.50 cwt. higher in mid-May than a month earlier and prices of beef cattle and calves were up 20¢ and 10¢ respectively. USDA said these increases were offset in part by a 49¢ cwt. decline in the average price of sheep and a 10¢ decline in hogs.

USDA reported that the mid-May livestock feed price index, at 202, was 1 point below April 15. All groups of feed items decreased except grain. Corn, grain sorghum and barley advanced, but oats showed a slight decline. Prices paid for hay declined seasonally and high protein and mixed feeds averaged below mid-April.

N. H. Bill Would Boost Truck Registering Fees

CONCORD, N.H.—Feed manufacturers and dealers with truck fleets are watching the progress of a new bill introduced in the New Hampshire Senate which would increase truck registration fees from 5¢ to 40¢ cwt., depending on the size of the vehicle.

Sen. James C. Cleveland of New London, sponsor of the bill, said it was designed to bring New Hampshire's fees into line with those charged in other states. The measure would boost the minimum fee for vehicles 4,000 lb. and under, from the present 35¢ to 50¢ cwt., and the maximum rate, for vehicles 40,000 lb. and over, would go from the present 60¢ to $1 cwt.

BUY FEED FIRM

PARMA, MICH. — Herman Pedersen and Gerald Horton have purchased the Farmers Cooperative here and are operating the business under the name, Parma Feed & Grain Co.

R. B. Parrott R. O. Westley

Executive Promotions Made by Central Soya

FT. WAYNE, IND.—The election of Robert B. Parrott as executive vice president of Central Soya Co., Inc., Ft. Wayne, and the promotion of Richard O. Westley to vice president in charge of the firm's grain division have been announced by Dale W. McMillen, Jr., company president.

In his new position Mr. Parrott will have administrative responsibility for soybean purchasing, soybean meal and oil sales, grain merchandising and the company's marine and truck transportation operations.

Mr. Parrott joined Central Soya in 1956 as vice president, with responsibilities for soybean purchasing and grain merchandising. He is past president of the Minneapolis Grain Shippers Assn., and earlier this year was appointed a member of the National Grain Storage Advisory Council to the U.S. Department of Agriculture.

Mr. Westley, formerly vice president in charge of the company's chemurgy division operations, will be responsible for heading the firm's grain division operations, which include both grain merchandising and marine and truck department activities.

He is a graduate of North Dakota State College, and has spent the past 25 years in management positions with soybean processing and grain merchandising firms. He is a member of the Chicago Board of Trade, and has served as a director of the National Soybean Processors Assn.

Both men will make their headquarters at the firm's executive offices in Ft. Wayne.

Forms Equipment Firm

FRESNO, CAL.—The Hunter Engineering & Machinery Co. has been formed here by Jack Hunter to serve the feed industry and allied industries. The firm will represent several feed equipment manufacturers. Mr. Hunter has been vice president in charge of production the past four years for what was the J. B. Hill Co., Fresno. The firm is now the feed division of the Balfour-Guthrie branch in Fresno. Several years ago he headed the J. C. Hunter Co. in Oakland.

Smaller Oats Crop Estimated

CHICAGO—A 1959 oats crop of 1,238,000,000 bu. has been estimated by C. M. Galvin, crop statistician for Francis I. duPont Co., on the basis of crop conditions June 1. This compares with 1,422,164,000 bu. for 1958 and the 10-year average of 1,293,976,000 bu.

He sets the oats acreage at 30,954,000, as against 31,826,000 a year ago. This would be about 10 million acres less than the 10-year average, and it is also materially below the official "intention to plant" estimate made as of mid-March, which showed 35,998,000 acres.

Reductions in plantings of oats were rather general in the central states, due in part to continuing cold weather during the seeding period. The condition of the growing oats crop was set at 84% of normal by Mr. Galvin. This compares with 85% a year ago and 82% for the 10-year average.

Mr. Galvin made no corn bushel forecast in June but he did give an acreage estimate of 82,147,000. If borne out by subsequent developments, this would be some 7.5 million acres more than was planted to corn last year, and it compares with the 81,765,000 acres planted for the 10-year average. It would be about 2 million acres below the "intention to plant" figure that came out of the U.S. Department of Agriculture March 18. As expected, the removal of all acreage restrictions as a requirement for participation in the government support program for this grain in 1959 was the main reason for the prospective wholesale increase in corn plantings this year.

For soybeans, Mr. Galvin made only an acreage estimate as of June 1. He set it at 24 million, which would be within 900,000 acres of the total sown for all purposes in 1958, and it would be about 800,000 larger than the "intention to plant" estimate of 2½ months back. If confirmed by later official figures, this will show that the big swing to corn plantings was not done at any great expense to the soybean acreage for 1959.

Memphis Tourney Set

MEMPHIS — The annual Memphis Board of Trade and Memphis Cotton Exchange golf tournament will be held June 9 at the Memphis Country Club. A large entry list is expected, with many prizes to be awarded. On the night preceding the tournament, the golfers will enjoy their annual dinner in the country club's dining room.

GEORGIA RECOGNIZES POULTRY INDUSTRY—Georgia's Gov. S. Ernest Vandiver (center) is shown accepting tickets to the second annual Poultry Coronation Banquet which will be a highlight of Georgia Poultry Products Recognition Week. The week will be observed throughout the state June 8-13. Presenting the tickets to Gov. Vandiver are Charles L. Davidson, Jr. (left), Stone Mountain Grit Co., Lithonia, Ga., and Hulan L. Hall, president of the Georgia Poultry Federation, sponsor of the event. Entertainment for the coronation banquet will be Les Paul and Mary Ford, popular TV personalities.

Delmarva Firms Plan New Soy Processing Plant

By Special Correspondent

SALISBURY, MD.—Seventeen of Delmarva's feed manufacturers and poultry operators have formed Delmarva Soya Processors and plan to build a $2 million plant and storage facilities.

Several areas are under consideration for sites, all located on the water so beans could be received from Virginia and the Carolinas, if necessary.

The purpose of Delmarva Soya Processors is to produce soybean oil meal for broiler feeds in order that the broiler business will be in a better economic position compared to other areas, officials said. It will also afford a local market for the soybeans produced by Delmarva farmers.

The feed manufacturers organizing Delmarva Soya use, at present, 85,000 tons of soybean meal per year. All the meal is shipped in at a freight rate of $17 per ton. Gainesville, Ga., gets the same meal by rail and barge at $7.15 per ton and Memphis, Tenn., $2.32, giving them a competitive advantage in broiler growing.

Savings in the freight cost by the local company will amount to $1,433,848 per year. Currently there are some 3,000 cars of soybeans shipped off the peninsula. The local processors will use more than half of these beans in the manufacture of soybean oil meal.

Firms Involved

Much of the stock for the new firm was subscribed at an organization meeting recently. Firms represented were Otis Feed Co., Otis Esham who served as chairman of the group; Berlin Milling Co., Sheldon Chandler and Bowen Quillen; J. McKenny Willis & Son, Inc., McKenny Willis and Robert Dryden; Nock's Feed Service, Harold

(Turn to DELMARVA, page 109)

Winfield S. Welch

SALES MANAGER — Winfield S. Welch has been appointed sales manager of the feed products division of Western Condensing Co., Appleton, Wis., announced Charles F. Martin, director of sales. In his new position Mr. Welch will have sales responsibility on a national basis for the complete line of Peebles' branded specialty feed products. Mr. Welch joined Western in 1950 as a sales representative in the feed products division. In 1955 he was made manager of the south central district, and in 1958 was made assistant sales manager of the feed products division. Prior to joining Western, he had been associated with the feed industry in various capacities for 15 years. Mr. Welch is a native of Indiana, and attended the University of Indiana School of Business Administration.

Broiler Council Opens Nationwide Campaign For Allied Members

RICHMOND, VA. — The National Broiler Council has opened a nationwide campaign for allied industry memberships, officials of the organization announce, "to add a second-stage push to the council's all-out effort to turn the corner to profits—through selling."

"Industry support for this program is continuing to grow. In fact it was up 24% during the first quarter of this year," according to Don Corbett, Waterville, Maine, president of the council.

"And we know from past experience the allied industries have a big stake, and feel a strong responsibility, in the success of this program."

The council's 1959 allied membership program is designed to give firms in the allied category an opportunity to invest in a category basis, more in line with the continuing finance plan used with processors, feed dealers, growers and hatcherymen, he said.

Top category in the allied investment program will go to Gold Certificate members, firms which invest 1/10 of 1% of gross sales to the broiler industry in the council, regardless of the size of the firm.

Other categories will include: Silver Certificate members—an investment in NBC of $5,000 or more. Blue Certificate—$2,500 to $5,000. Red Certificate—$1,000 to $2,500. Yellow Certificate—$250 to $1,000. Green Certificate—$100 to $250. Broiler Booster—$100 or less.

To be represented in the 1959 mid-year membership report, membership agreements must be completed before July 1, according to Mr. Corbett.

"Every member connected with broilers in any way has a tremendous lot to gain from the success of the Broiler Council program," Mr. Corbett stated. "The chain store program, the national promotions, the public relations and publicity work and all the rest of the activities now going on are all designed to build a sounder profit structure for the entire broiler industry. If ever the broiler industry needed to unite behind this program full-force, it would seem to me that now is that time."

Firm Announces New Financing Plan for Equipment Makers

NEW YORK — Arthur F. Silbert, vice president, Standard Financial Corp., New York, has announced a new plan which he said "will enable milling and feed equipment manufacturers to set up full programs for instalment sales of their income-producing equipment, obtain complete financing and have the financing company handle all the customer credit, collection and paper work at no extra charge."

Mr. Silbert said the program is available to manufacturers of income-producing milling and feed equipment in connection with their instalment sales to trade customers. "The financing company," it was announced, "will furnish such manufacturers with the necessary contracts, credit applications and notes, will check customer credits anywhere in the country within three days, and assume the chore of collection—all without charge."

Equipment purchasers would be required to make a down payment of 15% in cash or trade, the balance payable in 1-5 years. Standard Financial will advance to the manufacturer 90-100% of the gross amount of the customer's instalment note, minus the minimal finance charge. A brochure giving full details is available upon request.

Offices and subsidiaries of Standard Financial which will handle credit applications and collections are in New York City, Elmira, N.Y., Philadelphia, Pittsburgh, Chicago, Los Angeles and Dallas.

FOOD MARKETS GIVE EGGS FOR STAMPS

EAST PATERSON, N.J. — The Grand Union Co., East Paterson food market firm, has announced that as an added inducement to help egg farmers move the current surplus of eggs, its Triple-S trading stamps will be redeemable for eggs during the month of June.

For the rest of the month, anyone presenting 200 stamps at any one of 38 Triple-S redemption centers in five eastern and northeastern states will be entitled to a coupon good for a dozen large grade "A" white eggs at the nearest Grand Union market.

Simultaneously, Grand Union announced a joint promotion with Palisades Amusement Park in New Jersey whereby a thousand dozen eggs were given away June 5. Each of the first 1,000 women paying admission to the park on that date received a dozen eggs free.

Oilseed Meal Futures Prices Irregular

MEMPHIS, TENN.—Oilseed meal futures were irregular on the Memphis Board of Trade the past week, compared with the week before.

Nearby July unrestricted soybean oil meal made the best gain, partly resulting from trade buying several days and lower soybean oil a portion of the period. As oil moved down on profit-taking, more interest in oil meal was shown by speculative traders.

Most traders stayed on the sidelines, awaiting developments. Cash oil meal demand continued to be slow. The demand for formula feeds was at a fair pace generally, but still below trade expectations earlier. Feed ratios have shown no significant turn for the better, one pit observer said.

He added that seasonal influences in the past have frequently resulted in higher price levels for feed ingredients for this time of year and, although no evidence of these factors have appeared, the trade is watchful.

Unrestricted soybean oil meal closed June 3 35 to 85¢ a ton higher than on May 27, Eastern Trunk Line soybean oil meal 25¢ lower to 50¢ higher, bulk cottonseed oil meal and sacked cottonseed oil meal unchanged.

Issues Warning On Cattle Prices

LARAMIE, WYO.—The president of the American National Cattlemen's Assn. warned here that the nation's beef cattle industry might be "building fast" for a severe break in cattle prices.

G. R. (Jack) Milburn, Grass Range, Mont., addressing the annual convention of the Wyoming Stock Growers Assn., noted that an abnormally low slaughter of cows and calves in recent months is a "clear indication the national herd is continuing to grow rapidly."

He said only a general drouth would reverse the trend "unless each stockman looks closely at the future advantages of culling and cutting out a few head now.

"Prices of today should allow every cowman to sort out the culls and make his herd of better quality," he said. "Quality cattle can better withstand a market drop because quality can demand a premium at any price level."

Mr. Milburn declared the industry must avoid getting itself into a vulnerable position so that a drouth—"and there already are indications of drouth in many areas"—would force disorderly runs on the markets. "Cattlemen should never forget the lessons of the middle 1950's," he said.

Broiler Egg Set Drop Continues

SALISBURY, MD. — Hatcherymen in 22 important broiler producing states slowed down for a "cooling off" period last week. They set only 46,788,000 eggs. This was 2% less than the previous week and 9% less than the corresponding week a year ago.

Decreases in the number of eggs set from the previous week were reported in 17 of the 22 states. The sharpest cutbacks from the previous week occurred in Alabama, Pennsylvania and Arkansas.

Broiler growers in the 22 states started 33,892,000 chicks last week. This was up slightly from the previous week but 7% below the corresponding week a year ago. Increases were reported in 10 states—decreases in 12 states, compared to the previous week. The largest increases from the previous week occurred in West Virginia, Connecticut, and Texas.

The dullness in the broiler egg settings and chick placements is due to poor demand for broilers. Last week the Delmarva price slid again, going to an average of 16.06¢, compared to 16.24¢ the week before. A year ago the price was 21.51¢.

Delmarva growers sent 3,965,000 broilers to market last week. This was 1% less than the previous week, but 8% more than the corresponding week of 1958.

Broiler growers in Delmarva received an average price of 17¢ lb. for their birds sold during May. This was down 17% from a year ago. Relieving some of the burden of the lower price was a cheaper feed price. Feed prices were reduced 4%. Also chick cost at 8.2¢ was a reduction of 41%.

Plans New Feed Mill

NEWKIRK, OKLA. — Construction of a new $162,000 feed mill for the Farmers Cooperative Elevator & Supply Co., Newkirk, will begin this summer, John Schramm, secretary of the firm, has announced.

Smith-Douglass Makes Sales Appointments

NORFOLK, VA. — Smith-Douglass Co., Norfolk, has announced the appointment of E. P. Chandler to the position of western manager, feed phosphorus sales.

It was announced simultaneously that John L. Lindsay, sales representative for Coronet Defluorinated Phosphate in the southeast states, will be transferred to Texas City, Texas, to assist Mr. Chandler in sales representation for Coronet Granular Dikal in the western half of the U.S.

Mr. Chandler has been sales representative for Dikal, Smith-Douglass' dicalcium phosphate feed supplement, since May, 1958. Prior to that, he was employed five years by Texas City Chemicals as traffic manager. Mr. Chandler studied business administration at Texas University. He will continue to headquarter in Texas City.

Mr. Lindsay, a graduate of the University of Virginia in 1951, has been in sales work since.

Smith-Douglass feed phosphorus sales manager, Henry Highton, made the announcements.

E. P. Chandler John L. Lindsay

'58-59 Dehy Use Biggest in History

KANSAS CITY—Dehydrated alfalfa disappearance in the 1958-59 year was the largest in history. This fact is disclosed in the annual reports issued by the U.S. Department of Agriculture.

In the final report for the May through April period, USDA has revised its monthly production figures for both the 1957-58 and the 1958-59 years.

In the year which ended April 30, disappearance of dehydrated alfalfa totaled 1,155,800 tons. This compares with disappearance in the previous year of 1,064,500 tons and the five-year average of 1,027,760 tons. For the fifth consecutive year, disappearance exceeded the million-ton mark.

On the production side, output in the year just completed totaled 1,100,000 tons, or very nearly the same as the 1,110,700 tons produced in the previous year. The five-year average production is 1,031,200 tons.

The USDA report shows that stocks of dehydrated alfalfa on hand at producing plants April 30 amounted to only 36,000 tons. This compared with 72,400 tons a month earlier and 81,800 tons on the same date a year ago.

In analyzing these figures, the American Dehydrators Assn. comments: "Considering the good March and April production in California, it can be assumed that a good bit of the 36,000 tons is west of the Rockies."

Annual production figures show that last year Nebraska accounted for 36% of the total production, Kansas 12.8%, Colorado 9.2% and Missouri 4.1%. These four states accounted for more than 60% of the nation's total. California ranks third in production with 11.2% of the total. Ohio is fifth with 7.1%.

Canadian Firm Elects J. G. Forest to Board

WAVERLY, N.Y.—Joseph G. Forest, president of the International Stock Food Corp., Waverly, has been elected to the board of directors of the International Stock Food Co., Ltd., Toronto, announced J. L. Hennessy, president of the Canadian concern.

The International Stock Food Corp. supplies a number of feed specialties for all classes of livestock, as well as Silo-Joy, a new preservative for silage and hay.

Mr. Hennessy said that both the livestock nutritional specialty companies have similar operations, and that Mr. Forest's appointment will result in each firm being of more assistance to the other.

Following his employment by ISF of Canada for about eight years, Mr. Forest formed the International Stock Food Corp. in the U.S. in 1949, with J. F. Trudeau.

Marco Mills Names New Vice President

JOPLIN, MO.—Donald Bowers, who recently graduated from Kansas State University where he received his B.S. degree in feed technology, specializing in engineering, has been named executive vice president of Marco Mills, Inc., Joplin, Mo., by Alton (Bill) Bowers, company president.

Donald Bowers

Mr. Bowers will be in charge of sales management and general operations. He has worked in all phases of Marco Mills operations for the past six years during his vacation periods from school. While at Kansas State, he was initiated by Alpha Mu, honorary milling fraternity.

Merger of Egg Co-ops with Eastern States Completed

WEST SPRINGFIELD, MASS.—The merger of six New England egg marketing cooperatives with Eastern States Farmers Exchange was completed June 1. Officers, managers, and legal counsel for the final four met at West Springfield to sign title transfers and other papers which made them a part of Eastern States Farmers Exchange. Two others had similarly completed the merger steps on April 27.

Representing Connecticut Farmers Cooperative Assn., East Hartford, at the closing were William Weiner, Colchester, president; Abraham Levine, manager. Representing Eastern Connecticut Poultry Producers, Inc., Providence, R.I., were Etienne LaBelle, Dayville, Conn., president; Joseph P. Farrelly, manager. Representing Connecticut Poultry Producers, Inc., Hamden, were George B. Angevine, Warren, president; H. W. Bermender, manager. Representing New Hampshire Egg Producers Cooperative, Derry, were Edward Larrabee, Peterborough, president; J. Harold Elk, manager.

Attending the final merger steps in behalf of Eastern States were: Jonathan B. Davis, Sterling Junction, Mass., president; W. D. Milsop, general manager; W. H. Prigmore, assistant general manager; Miss Mildred E. Pike, treasurer.

The cooperatives which completed merger a month ago were Brockton Cooperative Poultry Producers, Inc., Avon, Mass., and Springfield (Mass.) Cooperative Auction Market Association, Inc.

Patrons of all six former marketing cooperatives will continue delivering their eggs to the same locations where they will be handled by the same personnel, officials said. All facilities are the property of Eastern States members, and the personnel become employees of Eastern States. Patrons who sell eggs through these facilities automatically become members of Eastern States Farmers Exchange.

"The merger agreements carefully protect the equity held by members of the various cooperatives," officials said. "Members will be paid in full directly by Eastern States over a period of five years. Egg suppliers are under no obligation to use Eastern States feed or other commodities."

To manage its new egg marketing department, Eastern States has named Howard Whelan, former general manager of the Brockton Cooperative Poultry Producers, Inc.

Safflower Plant Being Constructed in Montana

CULBERTSON, MONT. — A safflower processing plant, said to be the first in the Northwest, is being constructed here by Pacific Oil Corp., to be in operation Oct. 1.

The meal remaining after the oil has been extracted is recognized as an excellent protein supplement for livestock feed, according to Hannes Hallgrimson, field representative.

He and Arne Skedsvold will work together on a program of service, education and promotion of safflower in the growing area, and will handle the sale of meal when the plant starts operation.

Feed Firm in Lawsuit

OKLAHOMA CITY, OKLA.—Under advisement in U.S. District Court in Oklahoma City is the lawsuit by Safeway Stores, Inc., to prevent Chickasha Cotton Oil Co. from using the brand name "Save Way" for its manufactured livestock and poultry feed. Safeway Stores, Inc., alleges the name "Save Way" is an infringement on the plaintiff's trade name and asks the Chickasha (Okla.) firm be enjoined from using it.

Dr. D. Richard Knauff Lynn D. Christian

Borden's Names Two To Feed Positions

NEW YORK—Appointment of Dr. D. Richard Knauff as a research and development coordinator of the Borden Special Products Co. and promotion of Lynn D. Christian to technical advisor of the feed supplements department have been announced.

Dr. Knauff will be located at the company's product development laboratory, Elgin, Ill., where he will be in charge of coordinating research and development activities in animal feed supplements. Mr. Christian served as field service nutritionist at the laboratory in Elgin before joining the feed supplements department's home office in New York City four years ago.

Dr. Knauff was associated for 2½ years with Hess & Clark, Inc., Ashland, Ohio, before joining Borden's. Earlier, he was on the faculty of the University of Minnesota, where he earned his master's degree. He received his doctor's degree in veterinary medicine from the University of Georgia and his bachelor's degree in dairy technology from the University of Maryland.

Mr. Christian received his bachelor's and master's degrees in animal husbandry from Pennsylvania State University.

Gallimycin Products Patented by Abbott

NORTH CHICAGO, ILL. — Orally administered compositions of erythromycin salts for treating respiratory infections in poultry and other animals have been patented by Dr. Robert H. Hollis, assignor to Abbott Laboratories. Dr. Hollis is manager of the Abbott veterinary division.

The patent covers the firm's Gallimycin products, formulas which contain erythromycin thiocyanate, erythromycin stearate plus other salts to be mixed with feed or drinking water for the treatment of respiratory and certain other infections in poultry.

In addition, the use of any erythromycin salt in amounts ranging from .0025% to .2% by weight of the composition in feed, drinking water or other orally ingestible vehicles to treat respiratory infections in animals is covered by the patent.

Gallimycin was introduced in 1956 for combatting respiratory diseases in poultry. It is estimated that these infections result in a 20% annual loss to the poultry industry and cost poultry raisers in excess of $40 million a year, according to Abbott.

Abbott says: "Gallimycin has proved more active against PPLO (pleuropneumonia-like organisms) and common secondary invading organisms like streptococci, staphylococci and pneumococci than have the broad-spectrum antibiotics and streptomycin."

ED COLES RESIGNS

PRINEVILLE, ORE. — Ed Coles, Oregon Cattlemen's Assn. executive secretary for nearly six years, has announced his resignation, effective July 1. It has been approved by the group's executive committee. Mr. Coles told association officials he was resigning in order to devote his full time to operating a livestock auction yard at The Dalles with Paul Muller, Wamic, Ore., livestock producer.

Survey Made of Farmers' Feed Buying 'Habits'

MANHATTAN, KANSAS—Many Kansas farmers evidently fail to consider carefully the reasons for purchasing certain types of feeds, according to findings of a Kansas State University survey.

The survey included some 140 farmers in Lyon and Butler counties. About 70% of the farmers used some type of formula feed in their operations, according to Charles Reed, agricultural economist at Kansas State. The study was aimed at determining their reasons for the particular brand of feed they purchased.

"In his feeding operations, the farmer is, or should be, a rational buyer," Mr. Reed said. "Therefore, he would consider the factors which have a bearing upon the welfare of his business enterprise."

The farmers most frequently said prices, results, dealers and quality of feed determined which brand they purchased. Of 119 reasons given for buying certain brands, 25 were for results, 22 for prices, and 23 for quality of feed.

Another 24 answers indicated that certain brands were purchased because they were handled by certain dealers. "In this case, farmers had confidence in their dealers to offer a good product at a reasonable price," Mr. Reed continued. "While this is not strictly considered a rational reason, since it doesn't deal with the product itself, it does tend to show how strongly the dealer's reputation enters in to purchases."

Other reasons given included: Because other people use it, dealer mixing, and freshness and delivery service. Eleven farmers could state no reason for their purchases.

"Out of the 119 responses, 72 could be considered as rational (including two for freshness), because they relate to the farmer's experience with the product itself," the economist commented.

The farmers gave 178 reasons for trading with certain dealers. The decisions included the following responses: Location 38, friendship 33, prices 32, cooperatives 28, and quality of feed 26.

Assuming the dealer has only limited control over quality and prices, the most important reasons therefore become convenience of access, friendship, and the fact that the store is a cooperative.

50 Firms to Exhibit At Midwest Bulk Fair

ST. PAUL, MINN.—A "Parade of Profit-Making Ideas and Equipment" will be on display at the Midwest Bulk Fair to be held June 17-18 at the Minnesota State Fairgrounds here.

Sponsored by the Butler Manufacturing Co., the fair will feature displays from more than 50 manufacturers. On exhibit will be bulk trucks, wagons and carts, bulk storage tanks, conveyors and elevators, feedlot automatic feeding equipment, trucks for bulk bodies, automatic feed mills for on-the-farm installation and other new equipment.

The fair will be located on the Butler lot on the fairgrounds. A turnout of some 1,200 persons is expected.

ABBOTT DIVIDEND

NORTH CHICAGO, ILL.—Directors of Abbott Laboratories have declared the regular quarterly dividend of 45¢ a share on the common stock. It will be paid July 1, 1959, to shareholders of record June 10, 1959. The regular quarterly dividend of $1 a share on the preferred stock of the company also was declared. It will be paid July 1, 1959, to shareholders of record June 10, 1959.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
March 28	1,231	496	690	961	167	845	1,931	2,004
April 4	1,229	611	985	877	198	885	1,914	2,021
April 11	1,187	596	865	911	182	882	1,833	1,904
April 18	1,216	598	927	871	218	748	1,985	1,729
April 25	1,350	602	735	930	173	711	1,720	1,914
May 2	1,234	666	819	843	191	843	1,986	1,711
May 9	1,240	636	736	873	106	702	1,996	1,649
May 16	1,232	566	855	775	144	782	1,908	1,637
May 23	1,240	533	888	885	99	756	1,672	1,884
May 30	1,267	664	786	759	135	670	1,753	1,832

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
March 28	1,273	678	3,376	379	7,440	216	3,661	2,609
April 4	1,356	637	3,307	413	7,173	264	3,712	2,540
April 11	1,247	676	3,332	375	7,382	214	3,648	2,657
April 18	1,072	681	3,287	390	7,477	220	3,600	2,633
April 25	1,025	694	3,313	338	7,319	193	3,767	2,690
May 2	1,220	601	3,213	326	7,244	222	3,802	2,531
May 9	1,197	633	3,300	320	6,996	205	3,506	2,267
May 16	1,241	737	3,128	336	7,165	196	3,493	2,416
May 23	1,251	585	2,933	337	7,053	211	3,446	2,498
May 30	1,223	723	2,998	365	6,951	188	3,404	2,665

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1959	Total 22 areas 1958
March 28	3,761	505	2,475	336	256	1,213	36,583	30,134
April 4	3,745	559	2,558	352	258	1,207	36,801	31,793
April 11	3,618	488	2,473	329	280	1,245	36,316	33,156
April 18	3,265	485	2,600	324	279	1,173	36,139	33,291
April 25	3,567	468	2,627	418	250	1,188	35,992	33,647
May 2	3,466	550	2,455	375	258	1,054	35,609	33,930
May 9	3,527	485	2,131	369	219	1,055	34,148	34,910
May 16	3,479	396	2,023	343	244	1,091	34,187	35,504
May 23	3,428	394	2,097	399	244	995	33,828	36,390
May 30	3,501	423	2,200	371	227	987	33,892	36,532

AD MEN

(Continued from page 4)

try's story to all channels of public information."

Acknowledging there could be justified criticism of advertising in the feed industry, Mr. Kelley said he had hope that out of the Des Moines meeting would grow an organization of feed advertising men "that might keep feed advertising out of bureaucratic control and generally raise the standards of the profession."

Ray Van Poucke, sales and advertising manager, Ames Reliable Feeds, Ames, Iowa, explained development of the Industry-College Conference at Iowa State and reported that several preliminary planning meetings for the 1959 conference, Sept. 17, had already been held. Working together on the conference with the college are the Western Grain & Feed Assn., Feed Institute and the MFMA.

Heading the conference panel, he said, would be Dr. George Browning, associate director, Iowa Agricultural Experiment Station. William Sayre, Indianola, will represent feeders; Carroll Swanson, Des Moines, feed manufacturers; Jack McClaren, Fairall Agency, Des Moines, advertising; Richard Albrecht, Wallaces' Farmer, Des Moines, media, and C. R. Elder, director, Iowa State College information service, the college. Representing research will be Dr. Charles Lewis, Kent Feeds, Muscatine, for industry and Dr. Norman Jacobson, professor of dairy husbandry, Iowa State, for the college.

Mr. Van Poucke concluded his remarks with the observation that as farms grow larger and more specialized the feed industry will be dealing with "more-informed, sharper people." He warned that the feed industry, growing in size and importance, would be under much closer scrutiny of the federal government. "We couldn't do better than to attempt, through organization, to develop better feed advertising," he said.

Restricted Membership Proposed

Mr. McClaren of the Fairall Agency urged organization of the feed advertising group but suggested it be confined strictly to feed industry advertising people. "It isn't good," he said, "to be covered by the same blanket with manufacturers of additives and pharmaceuticals. You are their best and only customers—don't let them tell you how to handle their products."

Jack Dow of the Dow Agency, Omaha, said he believed any organization should include agency representatives. He denied that feed advertising generally was unreasonable, misleading or far-fetched, but suggested a committee be formed to look over current advertising and make possible recommendations for improvement to avoid criticism. He said there was a need for a clearing house where feed advertising men could go for accurate, factual information on new developments in feeding.

Others who took part in the general discussion were Dell Miller, Supersweet Feeds, Des Moines, and Harvey Bergren, Pay Way Mills, Kansas City.

Members and purposes of the four committees formed at the Des Moines meeting are:

Organization — Purpose: To define objectives for an advertising council, propose a name, propose a plan of organization, membership qualifications and frequency of meetings and work out other organizational details.

Members: Harvey Bergren, Pay Way Mills, chairman, and Fred Saltveld, Nutrena Mills, Inc., Minneapolis.

Current Feed Advertising — Purpose: To study current feed advertising in farm papers, direct mail, radio and television.

Members: W. G. Cook, Walnut Grove Products, Atlantic, Iowa, chairman; Jack Dow, Dow Agency, Omaha; Ray Gould, Dannen Mills, Inc., St. Joseph, Mo.; Roger Johnson, Roger Johnson Agency, Des Moines; Glen Bloom, Kent Feeds, Muscatine, and Bruce Symonds, Ralston Purina Co., St. Louis.

Dealer Advertising — Purpose: To study advertising and promotional material directed at dealers and to study current feed literature.

Members: Dell Miller, Supersweet Feeds, Des Moines, chairman; Dave Seibel, Rath Packing Co., Waterloo, Iowa, and W. W. Woodward, General Mills, Inc., Minneapolis.

Public Relations — Purpose: To study information on feeds, nutrition, management, etc., being presented to the farmer by college workers and agricultural publications.

Members: Ray Van Poucke, Ames Reliable, Ames, Iowa, chairman; Jack McClaren, Fairall Agency, Des Moines; Dr. LeRoy Hansen, Foxbilt, Inc., Des Moines; Bob Buckley, Wesley Day & Co., Des Moines, and Arno Dennerlein, the Quaker Oats Co., Chicago.

Convention Luncheon Planned by Canadians

TORONTO—A special luncheon to honor the charter members of the Canadian Feed Manufacturers Assn. is being planned as part of the group's convention June 25-27 at Bigwin Inn, Lake of Bays, Ont. The luncheon is scheduled for June 26. (The convention program was reported in Feedstuffs May 16, page 24.)

F. W. Presant will be chairman of the luncheon and J. E. (Ted) McRostie and W. R. (Col.) White will speak briefly. The association's national secretary will distribute copies of the group's 30-year history.

June 27 will be largely devoted to golf, special boat tours, water sports, swimming and the annual banquet.

DRUGS

(Continued from page 1)

either estrogenic or arsenical products now being used in feeds. But FDA spokesmen indicated that everything in regard to existing uses is frozen if any proposed changes are required to come under FDA review.

Thus, any feed manufacturer not now using estrogenic or arsenical feed products will not be able to include them in his feeds. A feed manufacturer now using either estrogens or arsenicals will be able to continue using them, but if he wanted to make any formula or other changes which would bring his feeds and labeling under FDA review, he would not be permitted to make the changes if the feed included an arsenical or estrogen.

Meanwhile, in view of the policy statement, FDA officials indicated that it would be well for all holders of previous clearances of estrogens or arsenicals to study their scientific data against the time when FDA will review all outstanding use approvals of estrogenic or arsenical substances now being used in feeds.

FDA said last week that certain actions taken previously under the law might not be possible under the new policy statement and that the status of existing authorizations would be reviewed.

The Delaney amendment states that "no additive shall be deemed to be safe if it is found to induce cancer when ingested by man or animal, or if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animal."

Estrogenic and arsenical products now used in feeds are, as explained above, affected by the policy statement, FDA officials said. However, they indicated, if scientific evidence is shown to prove that any product is not carcinogenic, it then would be removed from the coverage of the policy statement.

It has been widely reported that no new clearances would be given for estrogenic or arsenical products in feed, and in general that would be the case. However, an FDA official explained this week, if a new product were specifically shown to be noncarcinogenic, it could be cleared, although at present all or nearly all of the substances in question are regarded as "suspect."

In this connection, an FDA official indicated that certain arsenical compounds may not fall within the prohibitions of the Delaney amendment. He said this applies to a certain type of the chemical as compared to another type which has been used in disease control.

However, it was indicated that it will now be the job of scientists and attorneys to examine and have data to support their position on any particular products expected to come under FDA review.

Observations here from impartial sources indicate that the feed and allied industries must assemble front line legal and scientific personnel to meet the current condition. It is now in the hands of the lawyers and the scientists.

On behalf of FDA officials, it may be said that the recent action has been taken reluctantly, but necessarily, they feel, after passage of the Delaney amendment.

There has been some hope that congressional action might intervene to stop the FDA policy statement in regard to use approvals previously granted. However, this is regarded as only a vain hope, at least at present.

Meanwhile, one FDA spokesman called the policy statement a "status quo" order. Everything currently is under the "status quo" as established by FDA and will remain so pending any further developments on scientific and legal fronts.

Orvel H. Cockrel Alex Gordeuk

Feed Firm Makes Personnel Changes

CHICAGO — Red Comb-Pioneer Mills, Chicago, has announced the promotion of Orvel H. Cockrel from market research manager to marketing manager. He will coordinate the activities of the poultry feed, hog and cattle feed, dairy feed and merchandising departments.

Also in the marketing division, Alex Gordeuk, formerly associated with Nicholas Turkey Breeding Farm of Sonoma, Cal., and previous to that, editor of Turkey World and Broiler Growing, was named manager of the poultry feeds department, succeeding J. S. Berry who retired recently.

In making these changes E. E. Woolman, vice president and director of marketing, also announced a move to decentralize sales department authority and responsibility. Six regional sales managers will report directly to the director of marketing. They are Jack C. Ping, central region; T. Mickey Field, eastern region; Ernest Andrews, southeastern region; Richard L. Davis, south central region; Harry L. Gustin, east central region, and Roy C. Ritter, western region. Joe H. King was named sales training coordinator.

Molasses Distributor Boosts Asking Price

NEW ORLEANS — Markets for feeding cane molasses—which have been rather weak of late—showed both weakness and strength this week, the U.S. Department of Agriculture publication, Molasses Market News, reports.

At New Orleans the price generally declined one fourth cent to 11.75¢ gal. On the other hand, a blackstrap distributor was asking 1.5¢ gal. more than last week based on costs of imported supplies. In Texas ports, according to the publication, asking prices were unchanged to 1½¢ gal. higher, but no actual sales were reported as the higher asking price.

Meanwhile, the Cuban National Association of Sugar Cane Growers announced that this season's raw sugar production through May 12 had amounted to 5.3 million Spanish long tons, compared to 5.4 million as of the same date last year. Production of sugar this season is over 90% completed. Trade reports indicate that blackstrap molasses yields per ton of sugar produced continue well above last year.

Firm Plans Expansion Of Operation in Illinois

CHICAGO—Lowell Hoit & Co., through its subsidiary, the Federal-North Iowa Grain Co., has entered into a long-term lease with Gring & McCord covering the latter's 300,000 bu. sub-terminal elevator at Farmer City, Ill.

Federal-North Iowa company operates a large string of country elevators in Iowa and Illinois; the firm plans a broad-scale development of the feed, seed and fertilizer merchandising phase of its business at the Farmer City plant.

● No. 3 in a series of conversations with Gooch Feed dealers

"A Gooch dealer always has something to talk about"

"That's one thing I like about Gooch. They keep coming along with things that help me sell. Well, for example, in January and February they put special stamps on hog, calf and layer feed tags. Stamps that were good for free chick starter. It lined up some good chick starter customers for me, 'way early in the year. Then, I found hog raisers were real interested in Gooch's Pork Producers Awards Program. Most any good hog man can win an award and recognition in it. And another hot deal was Gooch's work glove offer. I give the Awards Program and glove offer a lot of credit for the fact my hog feed sales are up 50% or more. 'Course, these deals are only examples. Gooch is a live-wire outfit. There's always something happening that helps me make sales."

Yes, Gooch specializes in developing a series of timely sales-building promotions that work for the Gooch dealer in his area. Other examples are Red Circle Roundup Days and carload sales. Being able to offer top quality Gooch feeding and poultry equipment at bargain prices helps dealers get a foot in the door, too. When a dealer has something to talk about, he can build business. Ask any Gooch dealer.

There may be a Gooch franchise available in your area. Write to Gooch Feed Mill Company.

GOOCH FEED MILL COMPANY

Lincoln, Nebraska • Salina, Kansas • Council Bluffs, Iowa
Dalhart, Texas • Vicksburg, Mississippi

GOOCH RED CIRCLES ARE VALUABLE! GOOCH'S BEST COLLECT THEM

Grain Sorghum Output Triples in 3 Years; Further Growth Anticipated

MINNEAPOLIS—Grain sorghum, a feed grain crop which has tripled its production in the last three crop years, is still on its way up, according to George L. Jones, hybrid manager for Cargill, Inc., Minneapolis grain processing firm.

Today, Mr. Jones said in a recent report, sorghum stands fourth among all grains in volume produced annually. Its estimated use for livestock feed alone during the current crop year — 303 million bushels — is 1½ times its total production of 206 million bushels three years ago. Its total production in 1958 was 615 million bushels.

And the outlook, Mr. Jones said, is that "U.S. farmers—more skilled than any farmers in the history of the world, and working with increasingly vigorous hybrid seed—will continue to produce increasing amounts of grain sorghum well into the foreseeable future."

Following are excerpts from his report:

The crop's rapid growth in the past three years is generally credited to a series of closely related developments beginning with the introduction of hybrid sorghums in 1955. With the influx of hybrids yield per acre almost doubled, department of agriculture figures show average yield per acre stands now at 36.4 bu. as compared to the 10-year average of 19.6 bu., and this in turn caused more land to be placed in the increasingly profitable crop. Sorghum has taken over land formerly devoted to other crops in its traditional Texas-through-Kansas growing area, in the Corn Belt and in states on both coasts. An estimated 16.7 million acres were planted last year—almost exactly double the 10-year average of 8.4 million acres.

Influence of Hybrids

When hybrid sorghum appeared on the market four years ago, farmers—mindful of the yield bonanza brought to corn by hybrids — bought every available bushel and clamored for more. Demand exceeded production each year until 1958 when, according to industry leaders, commercial seed companies only barely could supply all their customers' wants.

The enthusiasm for hybrids was well founded, for 1958 USDA reports indicate that hybrids were consistently outyielding standard varieties by 15 to 25%, with some varieties recording a 40% yield bonus.

Yet the cost of hybrid sorghum seed is little more than standard, non-hybrid stock, averaging 21¢ lb. as compared to 18¢ lb. for the old types.

USDA estimates are that, in the western Great Plains, two-thirds of irrigated sorghum acreage and one-third of dryland acreage was planted with hybrids in 1958, and that approximately half of the more humid eastern Great Plains sorghum acreage was in hybrids.

Cargill Hybrids—one of the firms responsible for developing the new varieties—had been mindful of the need for a hybrid sorghum long before it was produced, but researchers early ran head-on into a major obstacle: How to control pollination, then cross purebred varieties to make a hybrid.

Problem in Pollination

In corn, the pollen-shedding "male" tassels and kernel-producing "female" silks are separate, and the pollination control needed to make a cross is relatively simple. But in bushy-headed sorghum, the pollen-shedding organs—anthers—are contained in the same envelope as the female parts, and this makes pollination control, in the way it's done with corn, impossible.

The breakthrough came not many years back when researchers discovered a male-sterile variety—a genetic "freak" which produced no pollen—that "gave birth" to another generation of male-sterile offspring when crossed with another plant in the same family. The sterile sorghum, unable to fertilize itself, was cross-bred with outside-the-immediate-family strains and the elusive hybrid was created.

'Dryland Corn'

Sometimes called "dryland corn"—sorghum can survive with far less moisture than either corn or wheat, and is more adaptable to rough ground. It's not uncommon for sorghum, hit by drouth that would wipe out less hardy crops, to halt its growth during intense dry spells, then resume growth and ultimately produce a normal crop after moisture again becomes available.

This ability is used to particular advantage in Nebraska where sorghum production rose to 78.4 million bushels last year from a 10-year 5.3-million bushel average. Some 1.7 million acres, usually devoted to corn but traditionally threatened by excessive dryness, have been "sorghumized" by farmers who have learned that one good rain—or one good watering by irrigation—will usually produce a crop.

The future for hybrid sorghums seems as rosy as its brief past. A recent issue of Crops and Soils, a trade magazine published by the American Society of Agronomy, predicts that by 1968 hybrids will be planted almost exclusively and that the crop will have become our second-most-important feed grain. The prognostication calls for more finely stemmed sorghums that will thresh easier, varieties with more of the yellow endosperm—a vitamin A carrier—found in corn, increases in grain size and improvement in grain colors.

Another basic reason for the sorghum boom is simply that farmers are becoming more skilled at raising it, as shown by an 86% increase in the national average yield per acre.

Price Supports Factor

Without question, part of the sorghum surge is attributable to government price support programs for wheat and corn. Last year many astute farmers in the Midwest and Southwest, where most sorghum is grown, considered the $1.82 bu. support price for wheat was too valuable to sacrifice by planting in excess of acreage allotments. Rather than overplant and take a chance on recouping their penalty by selling the excess on the open market, a good many farmers preferred to keep their wheat acreage where the government wanted it and plant sorghum—with its $1.02 bu. support price and no acreage controls—on the vacated land.

Corn farmers were as quick as their wheat-producing contemporaries to recognize economic opportunity. Sorghum bringing $1.02 in support prices enabled the corn farmer to stay within his corn allotment yet realize a maximum support price for every acre planted. The new government corn program doing away with acreage controls will, eventually, tend to regain for corn some of the acres lost to sorghum, but many observers agree the new program won't affect sorghum production for another year or more.

The U.S. crop—directly descended from sorghums cultivated for thousands of years in arid regions of Europe, Asia and Africa—was introduced here about 100 years ago. Soon, it found itself headed in two directions. One, a short, 4-to-5-ft. high dwarf type, provided an easier-to-get-at head of grain. The other, a taller—8 to 12 ft. high—forage sorghum was developed for use as silage. The crop is a member of the grass family.

As might be anticipated, tripling production in a three-year period has brought on some king-sized marketing and storage problems.

The biggest poser is one of surpluses. Before the 1958 harvest was even begun, 309 million bushels of grain sorghum were still in store—equal to half the 1957 production total.

Where will last year's record-breaking crop go?

The biggest single chunk—outside the enormous amount ending up in government-paid storage—is the 303 million bushels being absorbed by farmers and feed manufacturers as livestock feed. Sorghum can be fed pound for pound as a corn substitute; it varies only slightly from corn in chemical make-up—higher in protein and lower in fat.

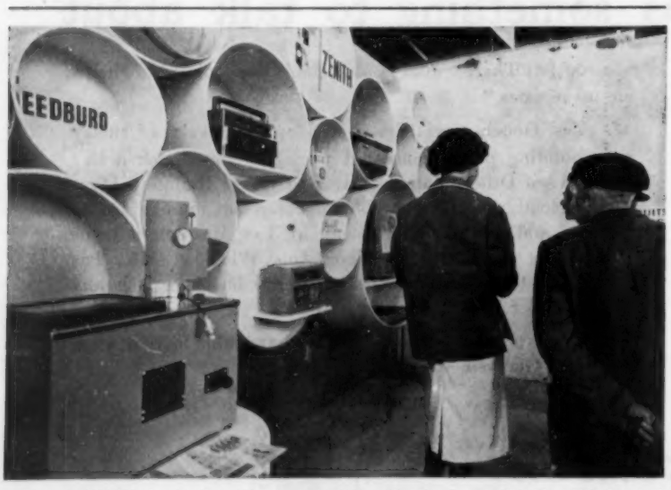
Industry will require 10 million bushels, processing the sorghum into thousands of different products. Sorghum's use in industry—as in livestock feeding—closely parallels that of corn and a decision on which to use normally is made on the basis of price.

Only 3 million bushels will be needed for seed.

Some 75 million bushels will be put into export, a far cry from the negligible 2,000 bushels shipped as recently as 1939. Sorghum exports rise when there is a favorable price relationship with corn. Both are more economical to ship—containing more salable nutrition value per unit of space—than barley or oats. Of the two, most countries prefer corn but will take sorghum when there is a price advantage.

Traditionally U.S. sorghum customers have been the dairying countries of Europe—the Benelux nations, the United Kingdom, West Germany, and occasionally Norway, Denmark and Eire. Other countries are eyeing American sorghums as they become more interested in livestock production.

In eastern nations such as India and Pakistan, and in Africa, sorghums have considerable importance as human food consumed in the form of flour, cereal and sometimes a meal made from ground seeds.



PARIS EXHIBIT—Pictured is a part of the "Basic Grain Grading Equipment Exhibit" at the recent International Trade Fair in Paris, France. In the foreground is the Steinlite moisture meter. The Seedburo Equipment Co., Chicago, was requested by U.S. government agencies to furnish the exhibit. Attendance at the fair averaged around 55,000 visitors daily.

Feed Men Hear Production Talks In Series of Technical Seminars

CHICAGO—Various aspects of feed production were covered by specialists in a series of seminars held in connection with the recent National Feed Show in Chicago.

A special section for the seminars was set up by Sprout, Waldron & Co., Inc., Muncy, Pa., as part of its exhibit area at the show, and feed men on hand for the show and American Feed Manufacturers Assn. convention attended the seminars which were conducted daily.

They heard and saw Sprout-Waldron engineers discuss and present diagrams and data on four different subjects—custom mill design and operation; commercial mill design; pellet mill operation; and bulk feed delivery. In addition to the talks, question-and-answer sessions were part of the seminars.

Following are summaries of the discussions:

CUSTOM MILLS — The planning, design and operation of custom mills was discussed by J. Howard Waldron, feed mill coordinator for Sprout-Waldron.

Mr. Waldron showed how a custom mill can start as a small, simple installation and then grow into a larger operation with the addition of more facilities. He mentioned starting with one 2-ton vertical mixer. For such a mixer he suggested a cycle of 5 minutes to load, 5 minutes to mix and 5 minutes to unload.

Continuing, Mr. Waldron outlined various set-ups, including one where there is a hopper scale between two mixers. Grain is then ground into the scale and is moved alternately into one mixer and then into the other. A set-up like this, said Mr. Waldron, speeds operations. Also, he said, weighing the grain means that one knows exactly how much concentrate to add.

Regarding hay, Mr. Waldron noted that if it is not ground finely enough, one encounters trouble in vertical mixers.

He went on to comment on mixer size, pointing out that larger mixers are now being used in custom mills—up to 5-ton horizontal mixers in some cases.

Mr. Waldron observed that custom millers are now more interested in pelleting and are using the small type pellet mills. Frequently the pellets are handled by air from the mill to the cooler. A one-floor installation can be used.

Touching on grain banking, Mr. Waldron showed how bulk storage tanks can be added to set up a grain bank. He suggested that the mill going into grain banking have a dryer.

Quite a number of mills, he continued, now receive their concentrates in bulk and are adding bulk bins for these concentrates. Weigh buggies then are used to weigh out the concentrate for mixing.

Answering a question on pelleting, he said that a small, 40 h.p. pellet mill will produce 4 tons per hour of poultry feed.

COMMERCIAL FEED PLANTS—In another talk and discussion period, Mr. Waldron traced the detailed planning that is necessary in developing plans for a commercial feed plant.

He emphasized that one should begin with an analysis of the market requirements and potentials and follow

this with a feed production plan which will indicate the types of feed a firm wants to produce and the quantities of each. This should also include a complete formula breakdown so that the manufacturer knows in terms of ingredients what his requirements are per eight-hour day.

With this information, one is then in a position to study the availability of materials and plan for economic purchasing, receiving and storage in order to meet production requirements.

"At this point," said Mr. Waldron, "you are in a position to determine the unit machinery since you know what must be done to the raw materials which are to be received, you know the capacities required, and you know your storage and in-plant handling needs. With this information you are ready to determine the nature of the building to house most efficiently the equipment.

"When you add to this an evaluation of your method of final distribution and storage of the finished feed and an analysis of your custom grinding and mixing requirements, if needed, you have laid the foundation on which to design and build a successful feed mill."

Mr. Waldron showed pictures and flow sheets of various feed plants designed and built by his firm. In this connection, he commented that "we have never built two feed mills exactly alike. We thought about the possibility of a 'package' commercial feed mill, but this does not work out because of varying requirements."

Among other things, Mr. Waldron described a Sprout-Waldron-Frank control system for batch proportioning and mixing. He showed how mixing and distribution, as well as proportioning, can be controlled with these systems.

Discussing bulk finished feed bins, he showed how a movable hopper scale, rather than a truck scale, can be used in loading out bulk feed.

Answering questions, Mr. Waldron made these points:

Nine-inch screw conveyors are usually used under bins, but sometimes conveyors up to 16 in. are used to move certain materials into a hopper scale fast enough.

A three-minute mixing cycle has been used on batch feeds with good results, even with fat (3%) and fish solubles in the horizontal mixer.

Concentrate bins are trowel-finished to get good flow. Steel hoppers, with one straight side, are used on square bins.

If chopped hay is being used in feeds, a live bottom bin is necessary.

Disc systems can help in bins in preventing bridging.

A hammermill, with a 1½-in. screen, is being used to break down fat lumps in feed and homogenize the feed in a final blending process. An attrition mill also is used for this.

One can load out bulk feed faster with a truck scale, but some are using a traveling scale.

If a person is building a mill to make a general line of feeds, it is advisable to make use of pneumatic vacuum and pressure systems. Air units cost more, but one can make this up on installation and cleanliness and maintenance, according to Mr. Waldron. A pressure system can be used to move feed from the mixer, and one advantage will be self-cleaning, with no residue. Quite a number of mills are moving pellets by air. In general, it was indicated in the discussion of pneumatic conveying, conveying systems made up of part air and part mechanical systems have worked out well.

PELLETING—R. B. Collier, service manager for Sprout-Waldron, advised feed men in an extensive discussion on "how to get the most out of your pellet mill." He first outlined some of the developments in the design of pellet mills and then made suggestions and comments on various phases of operation.

He noted that the location of a pellet mill can be very important. "The same machine installed without due consideration to room for operation and maintenance, or in a position that makes it difficult to get the material to and from the machine, can be changed from a source of profit to a source of constant irritation," he said. Mr. Collier went on to say that "steam is best applied at about 15 psig, but arrangements can be made to use high pressure steam."

He advised that for the mash bin above the pellet mill, "the installation of a bin bottom with the proper con-

(Turn to page 14)

SEES SOUTH AS NATION'S 'EGG BASKET'

AUBURN, ALA.—"The South is well on the way to becoming the nation's egg basket," S. L. Davis, extension poultry marketing specialist at Alabama Polytechnic Institute, said here recently. And he indicated that the current depression in the poultry industry is hastening the development.

Despite low prices, he said, Alabama and other southern states are expanding production. Midwest and northeast areas, which Mr. Davis said can't stand the low prices, are reducing operations.

Last year there were 4,300,000 hens in Alabama flocks, and the average flock size was 1,350 hens. Pullet production is now 34% above a year ago, so egg output will increase greatly in the fall, he said. By 1960, he expects Alabama to be exporting a large volume of eggs. It is already 75% self-sufficient in egg production.

Increasing production will cut Alabama egg prices, he declared, but the constant search for adaptation of efficiencies should keep total profits climbing.

In addition to lower labor costs, the South's warmer climate, and lower transportation rates for feed from the Midwest, Mr. Davis said the southerner's ability to master management techniques has been a big factor in southern poultry development. He predicted that within a few years the rate of lay in the South will exceed the national average. This fact, coupled with the tremendous upsurge in layer numbers, will "really have poultrymen in other areas scratching."

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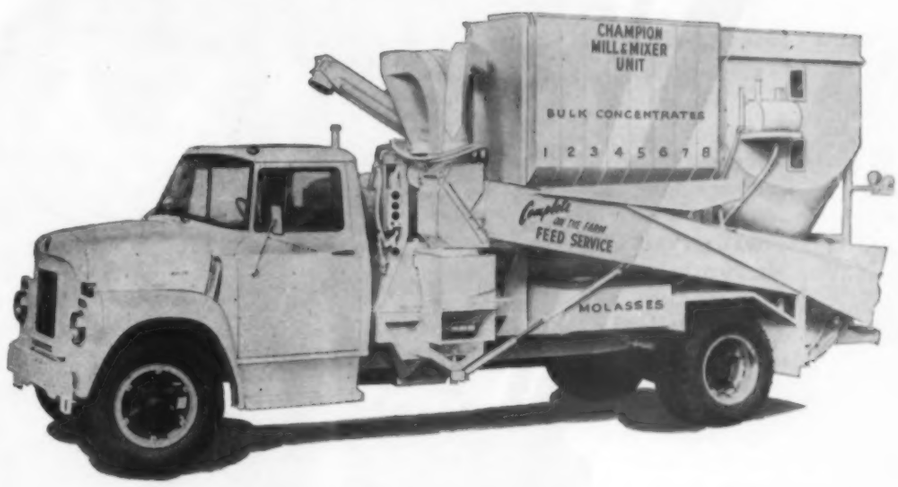

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1. Whitehair, C. K.: Medicated Swine Feeds. North Am. Vet. (Am. J. of Vet. Sci.) 39 (No. 2) (Feb. 1958): 32.
2. McGinnis, J. et al.: Use-history of Antibiotics as Related to Their Efficacy in Promoting Growth of Turkeys. Poultry Science, in press.
3. Bird, H. R.: Coming Events in Poultry Nutrition. Hatchery & Feed, July, 1958.

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Feed for Thought

DRUGS ON THE MARKET

"A drug on the market is worth two in the laboratory," might become the slogan for the feed additive industry with the Food and Drug Administration's consideration of the Delaney amendment to the new feed additive law. The amendment states that no additive shall be deemed safe if it is found to induce cancer when ingested by man or animals after proper tests. Based on the Delaney amendment, use of arsenicals and hormones in feeds may be outlawed.

Many of the arsenicals and hormones under scrutiny of F.D.A. have induced cancer in laboratory animals when administered at high levels. What other drugs for disease prevention will be outlawed by F.D.A. in interpretation of the Delaney amendment?

Will we be forced to surrender the progress made during the past few years in improved feed utilization and disease prevention?

What other additives which we have come to rely upon for reducing our cost of production may also fall into the discard?

The current situation recalls to mind the death of DPPD as a feed additive a few years ago. DPPD, an extremely effective antioxidant which protected the fat soluble vitamins in feeds, and helped to promote pigmentation in poultry, was also convicted by circumstantial evidence and banished from use in feeds.

The threatened loss of the use of arsenicals, hormones and disease control drugs brings sharply to mind the need for reemphasis of sound management, including "old fashioned" sanitation practices. Ike Riggs in his keynote address before the American Feed Manufacturers Convention last month, lauded the joint AFMA-Animal Health Institute policy statement on medicated feeds. Emphasis on sound management including properly balanced feeds and disease prevention is the responsibility of every one in the feed business. Reducing production costs through sound management principles can help to get our poultry industry back on a sounder basis.

Promote sound management practices, help your feeders cut their costs and you'll help yourself by increasing your business as well.

J. R. LINSNER
Director of Technical Services
PETER HAND FOUNDATION

Look for "Feed for Thought" every month. This popular column appears regularly in this same place (page 14) in the first Feedstuffs issue of each month.

Peter Hand

PETER HAND FOUNDATION

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nection to the pellet mill feeder can mean all the difference between steady dependable flow through the mill and constant trouble." He recommended taking this up with experienced persons or engineering firms.

If it is necessary to elevate hot pellets, he continued, "probably the best solution to date has been the negative pressure air conveying system." He went on to note that in general, pelleting installation designs that minimize handling of the finished product are the most desirable.

The first requirement for good pelleting, Mr. Collier emphasized, is a well mixed mash with the right formulation. He noted that ingredients should generally be finer than for normal mashes. This means that corn, for example, must be ground to where no particles greater than ⅛-in. ring size are present. This doesn't mean a ⅛-in. screen is necessarily required. Due to the shattering which occurs in the hammermill, a ¼-in. screen is used successfully.

In conditioning, with the average mash, it is necessary to raise moisture content to between 13 and 17% through use of live steam. With most mashes, proper condition is indicated when a pinch of the hot mash squeezed between the thumb and forefinger will form a slick wafer of a slightly doughy nature. Indications of insufficient temper in the mill are higher power input, low production rate and shiny pellets. Pellets of low temper appear quite hard as they come from the die, but they are usually fragile and soft in the center.

Discussing design, Mr. Collier said "95% of all pellet mills produced today are of the vertical rotating ring design." He advocated use of the V-belt drive.

A good guide to need for readjustment of rolls, he went on, is a drop in production capacity. Regarding cut-off knives, he said it is important that they be set to cut at about the same rate, for if one knife is cutting more than the other, the relatively idle knive will make an excess of fines.

"It should be remembered that in cooling pellets with ambient air," Mr. Collier said, "one must expect the pellets to discharge at a temperature somewhat above the ambient. A temperature 8 to 20 degrees above the ambient temperature is not unusual, and in the summer the pellets should be expected to discharge at temperatures considerably higher than in the winter.

"A word of caution about this. It is entirely possible in a hot dry climate to store pellets that come off the cooler at 130 degrees, whereas pellets discharged from a cooler in a cold, wet climate at 60 degrees may spoil promptly. One answer to the cold weather problem is to provide some heated air to dry the pellets and then cool them with cold ambient air."

Mr. Collier advocated use of a cooler with automatic louvers, which forces air through the pellets regardless of whether the cooler tower is partially or completely full.

In discussing crumbling, Mr. Collier mentioned that a trend among broiler operators is to concentrate on a 10/64-in. pellet and not use crumbles.

The crumbler, he continued, is a compact modified roller mill that normally needs little attention.

Mr. Collier also made recommendations on maintenance. He noted at the outset that the feeder-conditioner needs certain routine maintenance, including lubrication of anti-friction bearings; the interior needs a regular cleaning schedule. Magnetic pick-up of tramp iron is very important in pelleting units. Regardless of the method by which the die is mounted, Mr. Collier said, the die is a very close fit in the housing, and care should be taken so that in mounting, it is started into the fit square and clean and is pulled home without cocking in the fit.

If rolls have a tendency to bind, he went on, there is most likely something wrong with the roll bearing adjustment. Suppliers' advice on the adjustment should be followed. Mr. Collier also made suggestions on lubrication in connection with rolls and die.

Maintenance of coolers is not so critical as that of rolls and die. General good housekeeping and routine lubrication are needed.

"The crumbling unit," said Mr. Collier, "is more often misunderstood and poorly operated than anything else but the pellet mill itself." For one thing, he advised making crumbles as large as the trade will accept. Other advice on adjustments and maintenance also was given.

If crumble production is heavy and of a size that produces a considerable amount of over-sized material, it is more efficient to provide an auxiliary roll to crumble the overs. On some installations, it is simpler to return the overs with the fines to the pellet mill or to return the overs to the cooler for another trip through the crumbles rolls while the fines are being taken back to the pellet mill.

BULK DELIVERY — Different types of bulk trucks were discussed by S. E. Brong of Sprout-Waldron's bulk truck division, who made certain suggestions and recommendations.

Mentioning pneumatic vs. mechanical trucks, he said that for short distances, speed of unloading from auger truck is slightly faster but that on longer runs, the air unit is faster. However, he said, since a delivery rate of 15 to 20 tons per hour is satisfactory in most cases, there is little difference in unloading rate between the two types.

On the question of positioning for unloading at the farm, said Mr. Brong, the pneumatic truck is "head and shoulders above the auger units."

Generally speaking, he said, "the pneumatic unit is not limited in terms of the feedstuffs it can handle. The auger truck is." He said that in handling molassified feeds, trouble can result with augers.

Mr. Brong said that when operators have switched from mechanical to air delivery, they have reduced the amount of pellet breakage. He also advocated pneumatic unloading be-

COUNTER DISPLAY—American Cyanamid Co., New York, will make available to dealers of animal health supplies full-color counter displays, each holding 12 one-half pound jars of Aureomycin Soluble. The wholesaler and dealer will pay for 11 jars—the other one will be free. Included in the merchandising plan is an offer to purchasers of a three-way working lantern for $1 and a box top from a half pound jar of Aureomycin Soluble. The drug is used for treating poultry and livestock during conditions of stress or disease.

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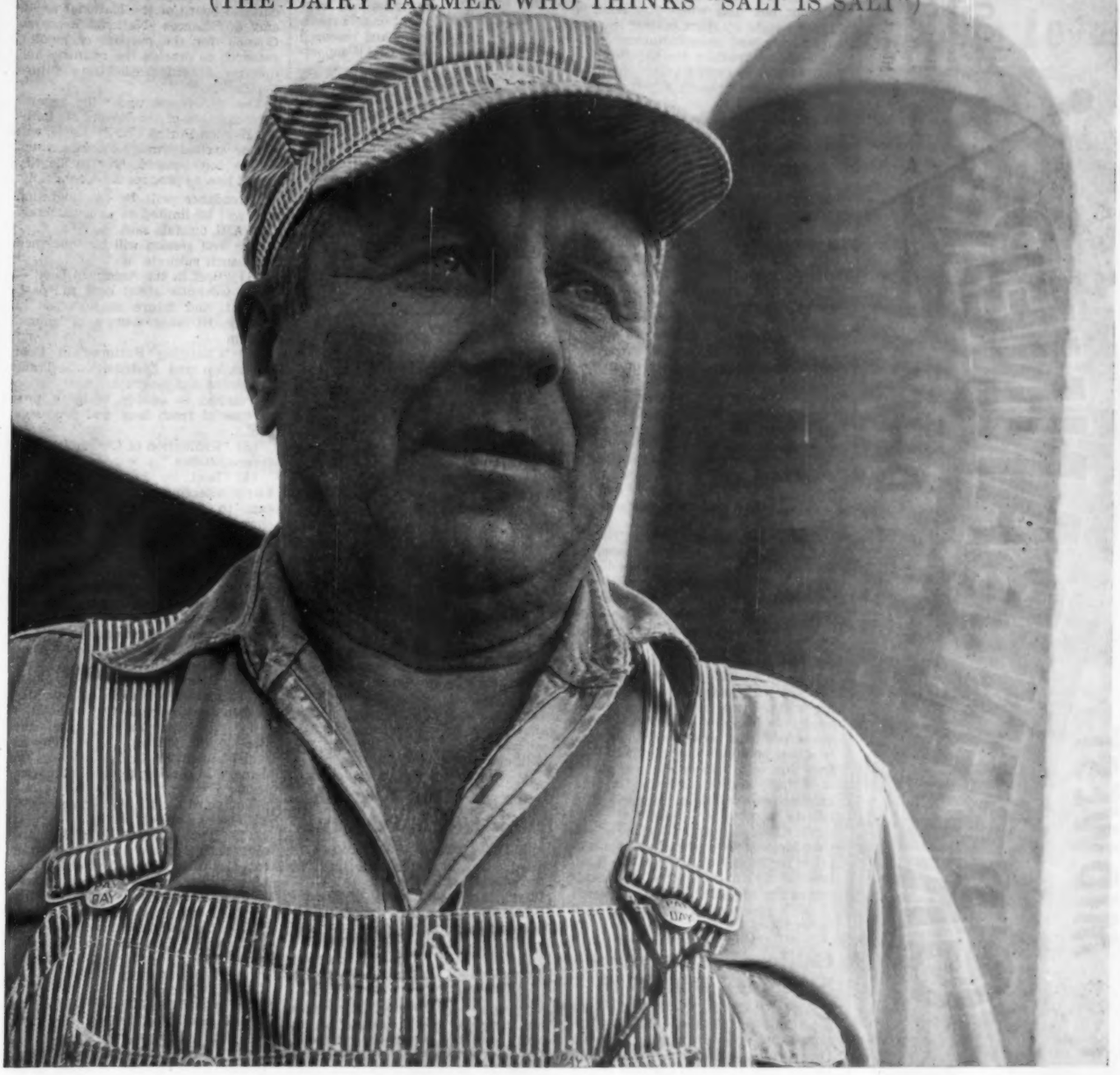

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cause of ability to deliver feeds to greater heights.

Discussing truck payload and durability, Mr. Brong said that as a general rule, "quality built trucks, whether mechanical or pneumatic, are quality built trucks." In the mechanism of the pneumatic unit, he said, there are built-in maintenance advantages but these are "relatively minor." "In terms of achieving greater payloads," he said, "I should like to point out that when you secure lighter weight by short cutting sound engineering and manufacturing, you are building troubles for the future. . . . As manufactured today, quality mechanical units weigh slightly more than the components of the pneumatic systems, and comparable trucks in terms of materials and carrying capacity weigh about the same."

Commenting on tank type vs. tailgate units, Mr. Brong said, "in deciding on the type of bulk unit needed, you must take into consideration the nature of your business, the location of your customers, the size load you will have to carry, frequencies of trips, mileage between stops, terrain and available roads, etc. . . . In areas where the dealer or distributor is faced with low volume deliveries or serves farms where grains are mixed with manufactured concentrates, or where special supplements or medicated products are required, the economical way to go bulk seems to be through use of bulk feed conversion or tailgate units. Trucks equipped with these pneumatic delivery units can often travel in areas generally inaccessible to heavier tank type trucks. These tailgate systems can be installed on a flat bed truck or a dump truck."

"The self-loader device," Mr. Brong continued, "gives a new dimension to the bulk truck." He described his firm's unit. And he went on to say the self-loader makes it possible for one man to pick up feedstuffs and deliver them to the final destination; can pick up feed from a rail car or nearby town; can empty bins at the farm with its air system and then fill the bins with new feed without making another trip; can eliminate overhead bulk bins in a bulk station; can move feed from a customer's old bins to a new poultry house; can help load feed during a temporary breakdown of a bulk station elevator; can be used to vacuum clean sections of a mill or a customer's bins.

Mr. Brong urged feed men to see that farmers have proper storage and other facilities and thus get the most benefits from bulk feed. He mentioned for one thing that a minimum of 25% reserve bin capacity should be provided.

California Conference Scheduled Oct. 18-19

SAN FRANCISCO—The 12th annual California Animal Industry Conference, sponsored by the California Hay, Grain & Feed Dealers Assn. and the division of animal sciences at the University of California, will be held Oct. 18-19 in Fresno.

Announcement of the dates followed the recent first meeting of an eight-man committee appointed to make plans for the event.

Over-all chairman, and representative of the dealers' association, is Berton Maxwell, Poultry Producers of Central California, Petaluma. Others from the feed group include Dr. Herbert Wilgus, Ray Ewing Co., Pasadena; Dolph Hill, Golden Eagle Milling Co., Petaluma; Dr. H. J. Almquist, the Grange Co., Modesto, and Bob Campbell, Anderson-Smith Milling Co., San Francisco.

University representatives on the committee include Dr. D. E. Jasper, dean of veterinary sciences; Dr. J. H. Meyer, department of animal husbandry, and Dr. C. R. Grau, department of poultry husbandry, all of the Davis campus.

A general program was established, and invitations to proposed speakers on animal nutrition and feeding problems were to be mailed.

Squealer Feed Co. Names Nutritionist

HARLAN, IOWA—Squealer Feed Co., Harlan, has announced the appointment of Sheldon Howerter as nutritionist. Gaige R. Walters, vice president, said Mr. Howerter has been placed in charge of the firm's feed formulations, registrations, experiment and research and call department.

Sheldon Howerter

A graduate of the University of Illinois with a master's degree in nutrition, Mr. Howerter was formerly with Dawe's Laboratories, Inc., Chicago, and with the research department of Armour & Co.

"This announcement, coupled with the appointment recently of R. W. Tallman as sales manager, will allow this firm to better serve the feeders of western Iowa," Mr. Walters said.

Iowa Egg Production Shifts Toward North

AMES, IOWA—Iowa's egg production areas have been undergoing a continuous shift toward the northern portion of the state during the past 10 years, according to Paul Walther, extension poultryman, at Iowa State College.

Northern Iowa gained two hens or pullets per acre of farm land from 1948-58. Southern Iowa lost 16 hens or pullets per acre during the same period. The northern Iowa counties now have almost four times as many hens and pullets as do the southern counties.

Mr. Walther said the greatest concentration in poultry numbers was in areas under the influence of one or more aggressive hatcherymen, feed dealers or egg buyers.

Development of quality egg-marketing programs is the most important factor in the growth of certain poultry areas, according to Mr. Walther.

Georgia Sees Growth In Livestock, Poultry

ATHENS, GA. — The future of Georgia's agriculture looks like one of considerable expansion. Dr. C. C. Murray, dean, University of Georgia College of Agriculture, recently outlined a program designed to result in a $400 million increase in Georgia's farm income by 1965. This program was reported in a university "scope report" called "What Can Be Done?"

- Georgia, which today grows more than twice as many broilers as any other state has a goal of producing 400 million broilers in 1965—an increase of approximately 60% over 1957's 261 million.
- Egg production goal is 2½ billion by 1965, nearly double 1957's production of 1.3 billion.
- Georgia's 1965 turkey goal is 750,000, compared to the 342,000 grown in 1957.
- The state is looking forward to producing 1½ million head of beef cattle by 1965, an increase of 300,000 over 1957; 2 million hogs, an increase of 270,000, and 75,000 sheep, more than double the 35,000 grown in 1957.

Swine Station Planned

NEW HAMPTON, IOWA — Plans to construct a $30,000 swine testing station here were announced by directors of Northeast Iowa Swine Testing Station and of Midland Cooperatives, Minneapolis. Plans call for the station to be operating by Sept. 1. Midland will finance, construct and operate the station. It will be available to breeders from Iowa, Minnesota and Wisconsin.

Beef Conference Set at Purdue For Oct. 19-20

WASHINGTON — A conference is to be held at Purdue University Oct. 19-20 under joint auspices of the Agricultural Research Institute and agricultural board of the National Academy of Sciences—National Research Council, for the purpose of guiding research to provide the quantity and quality of beef needed for future population.

The conference, under the general chairmanship of Dr. Roland M. Bethke, Ralston Purina Co., St. Louis, will center around three sessions devoted to the beef wanted, how to identify it and how to produce it economically.

Attendance will be by invitation and will be limited to approximately 500, ARI officials said.

The first session will be concerned with such subjects as:

(1) "Beef in the American Diet"—What we know about beef and past, present, and future consumption in relation to other sources of animal protein.

(2) "Changing Patterns in Beef Utilization and Distribution"—Trade utilization and geographic distribution in relation to quality, weights, proportion of fresh beef and processed beef.

(3) "Evaluation of Consumer Preference Studies."

(4) "Beef for Family Use"—Factors affecting consumer selection; cuts to fit family conditions, and changes in home preparation of beef.

The second session will include subjects such as:

(1) "Factors Indicative of Quality in Beef and Their Measurement"—Physical, chemical, panel (methodology) tests, maturity, condition and marbling as measures of quality.

(2) "Grades and Standards"—Their evolution and application.

(3) "Relationships between Quality, Grades and Standards"—Quality as measured by laboratory techniques.

(4) "Economic Impact of Identified Beef in the Market Place"—The effect of identified beef on supply and demand in a changing marketing pattern.

The third session will be concerned with such subjects as:

(1) "Type and Quality in Live Animal and Carcass Values"—Characteristics of live animal affecting rate of gain, cut out and quality of beef, slaughter and carcass grade relationship; show vs. commercial standards.

(2) "Genetic Aspects of Production Efficiency"—Hybridization, heritability of rate of gain, fertility factors, rib-eye area and type.

(3) "Physiological Factors Affecting Production Efficiency"—Feed additives, control of reproductive cycle and heat tolerance.

(4) "Nutritional Factors Affecting Production Efficiency"—Trend in increased efficiency of feed utilization, relationship of degree of finish to efficiency of feed utilization, relation of age to efficiency, within-breed type and efficiency of feed utilization.

(5) "Management Systems and Production Efficiency" — Changing pattern in management, effect of scale and integration.

Committee Members

Members of the organizing committee are A. O. Rhoad, chairman; T. C. Byerly, O. W. Hermann, D. M. Doty, Gladys Vail, John H. Guthrie, Carl F. Neuman, Arval L. Erikson, C. B. Cox, H. H. Stonaker and H. H. Cole. The conference is to be supported by grants to National Academy of Sciences-National Research Council from industry and interested groups.

Further information can be obtained from Dr. Rhoad, Kingsville, Texas; Mr. Cox, Purdue University, Lafayette, Ind., or LeRoy Voris, executive secretary, Agricultural Research Institute, 2101 Constitution Ave., Washington 25, D.C.

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Rations supplemented with higher dicalcium phosphate levels produced faster liveweight gains and more efficient feed utilization in a series of cattle feeding tests at State Agricultural Experiment Stations.

Iowa State[1]

Tests conducted by Iowa State College researchers indicate cattle receiving higher dicalcium phosphate rations graded higher at slaughter and returned greater margins over feed costs. The Iowa State report concludes...in some cases a higher level of total ration phosphorus, possibly as high as 0.3 percent, may well be needed.

Purdue[2]

According to a study conducted by Purdue University researchers, raising the phosphorus level in a corn-soy ration from 0.30 to 0.45 percent improved rate of gain 29% and feed efficiency 6.6% when fed to growing swine on ladino pasture. A further increase in phosphorus to 0.60% improved feed efficiency 5.7%, but failed to stimulate gains further. Several pigs on the corn-soy basal ration exhibited borderline phosphorus deficiency symptoms.

South Carolina[3]

An animal deficient in phosphorus from either hereditary genetic defects, or because of prior consumption of a low phosphorus ration may bloat, regardless of the level of nutrition in the feed crop. Therefore, a critical phosphorus deficiency in ruminants should be corrected through feeding of dicalcium phosphate or other mineral phosphates or by feeding high phosphorus concentrated feeds prior to being placed on luscious legume pastures.

Texas[4]

In feeding trials on the King Ranch in Texas, cows fed supplemental phosphorus weaned 39% more calves, averaging 50 pounds more weight per calf. In addition, feed lot operators in the Southwest have discovered that higher phosphorus levels result in faster gains.

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1. Different Kinds and Amounts of Phosphorus in Fattening Cattle Rations—Agricultural Extension Service, A. H. Leaflet 209; Wise Burroughs, Arthur Raun, Edmund Cheng, C. C. Culbertson, Iowa State College.
2. Phosphorus and Protein Levels for Growing-Finishing Swine on Legume Pasture—C. E. Jordan, J. H. Conrad, M. P. Plumlee; W. M. Beeson, A. H. 215, Purdue University.
3. Relation of Phosphorus Deficiency to Acute Bloat in Ruminants—H. P. Cooper, 69th Annual Report, South Carolina Agricultural Experiment Station, Clemson, S. C., May, 1957.
4. Methods of Supplying Phosphorus to Range Cattle in South Texas—Texas Agricultural Experiment Station, Bulletin 773; E. B. Reynolds, J. M. Jones, H. H. Jones, J. F. Fudge and R. J. Kleberg, Jr.

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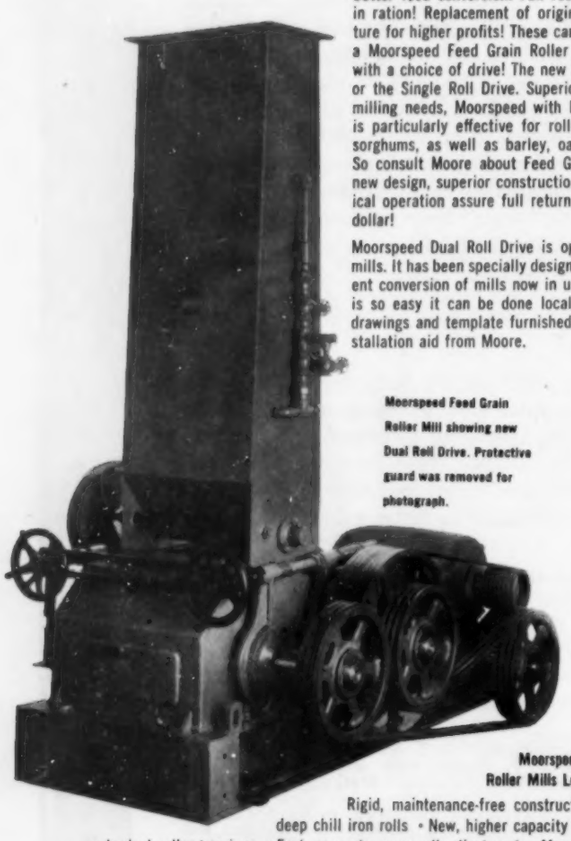

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Low level yearling heifers at the end of the first winter treatment. These heifers lost 48 lb. from fall to spring, yet continued to make some skeletal growth.

Effect of Plane of Nutrition on Performance of Beef Cows

By Dr. L. S. Pope
Animal Husbandry Department
Oklahoma State University
Stillwater, Okla.

Beef cattle supplements make up a significant part of the formula feed output in many areas. Most of this is purchased by the producer to balance out deficiencies in poor quality roughage, which is usually the basic part of the winter ration. The needs of certain classes of cattle, such as weaner calves, for protein and energy have been well established. In contrast, the requirements for growing heifers or mature brood cows have received much less attention.

Current standards for beef heifers call for liberal feeding during the winter in order to promote maximum growth and development, and to avoid stunting, poor calf crops and light "doggy" calves at weaning. The high cost of rations which permit rapid growth are believed to be justified by earlier maturity, larger mature size, increased performance and a longer life span. Little allowance is made for the ability of cattle to recover from poor winter rations on lush summer pasture.

The concept of "maximum nutrition" for the female may have merit in species which grow and develop rapidly, and where concentrates make up the ration. Beef cows, however, exist only to produce a live calf and suckle it for a short time. The optimum plane of nutrition from an industry standpoint must consider the lifetime performance of the female. Few studies of a long-time nature have been conducted to date.

Other Species

Research with other species provides some interesting comparisons. Over 40 years ago, Osborne and Mendel (1) observed that rats starved for long periods could recover in body size. Female rats could subsist on poor diets for long periods and then apparently recover and reproduce normally. McCay (2) noted an increase in longevity in rats fed restricted diets. Fuller (3) and Singsen et al. (4) have recently reviewed the pros and cons of restricted feeding of pullets for flock replacements and broiler-type breeding hens. Mayer (5) has recently reviewed the human health aspects of obesity—a problem termed "one of the most serious public health problems facing western societies."

Research with many species seems to fit the same general pattern. Wisconsin researchers have shown that limited feeding of gilts (6) or ewes (7) may decrease ovulation rate, but enhance embryo survival during the first few weeks after conception.

Reid et al. (8) at Cornell have shown that dairy heifers reared on rations supplying 65, 100 and 140% of Morrison's allowances showed little difference in milk production when all were fed liberally after calving. Despite wide differences in body weight at parturition, and a longer time to reach sexual maturity, poorly fed heifers tended to recover in body size when feed was again abundant. At Tennessee, Swanson et al. (9), working with identical dairy twins, found that the twin fed excessively during growth gave less milk during lactation than the normally fed twin. In later research (10), heifers fed restricted rations during growth were decidedly smaller at parturition and had more difficulty at first calving, but tended to produce nearly as much milk as those fed more liberally. Thus sexual maturity and growth rate may be affected by low feed levels, but milk production depends more on nutrients available during lactation. While differing in some respects, research with a number of species has failed to indicate that "low level" feeding is detrimental to fertility, or life span.

Beef Cattle

Beef cattle may be more affected by high planes of nutrition than other species because they have been selected for centuries for ability to accumulate large excesses of body fat. Moreover, they produce a relatively small fetus and are poor producers, as shown by Arkansas tests (11) on milk production of beef cows. Under range

Yearling heifers wintered at the very high level to make maximum gains during the first winter (280 lb. each). Much of this advantage in condition is lost by fall.

Two-year-old heifers at the end of the second winter at the low level treatment. Calving at two years of age, they lost 243 lb. from fall to spring. Time of calving has been delayed and weaning weights reduced by limited feeding during growth and pregnancy.

conditions beef heifers tend to calve at a later age than dairy heifers.

Management practices vary from farms or purebred herds where heifers are fed to develop rapidly, to range conditions where long periods of slow growth or weight loss during the winter may occur. Such weight losses may be fully recovered on summer grass. The question here is whether or not more liberal feeding might pay.

Beef females may be most sensitive to periods of low feed intake or undernutrition during (a) the period from weaning to first conception when growth is most rapid, (b) while producing the first and second calves, and (c) as a mature cow where successive periods of weight loss might affect percent calf crop, weaning weight or life span. Within each phase, the over-all effects of liberal vs. poor feed supplies must be weighed against expected returns and relative costs of winter and summer rations.

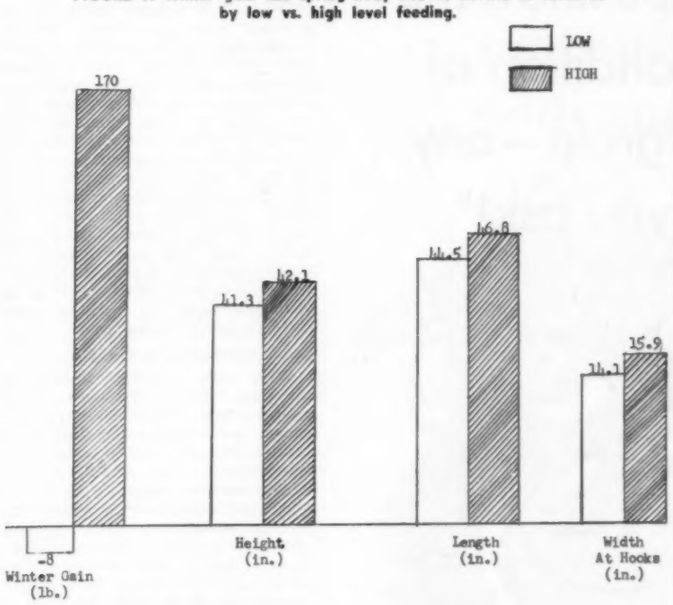
Considering the period of growth and development of the beef heifer, extensive British research, as reviewed by Hammond (12), and studies at Minnesota, Missouri and elsewhere give us much basic information on how the body grows and develops, and something about its composition at any given point. From this, it appears that the animal body grows in segments, so to speak. The four major body tissues—nervous, skeletal, lean and fat—develop at different intensities, and in the above order of priority for available nutrients. During weight loss, the tissues regress in somewhat the reverse order, with skeletal and nervous tissues least affected.

Two Concepts

Two concepts of beef cattle growth have been advanced during the past quarter-century. Guilbert et al. (13) at California described the beneficial effects of "continuous growth." By supplementing weaner calves during the period of short range feed supply, these workers were able to show that small amounts of additional feed would allow continuation of growth, thus cutting down on the time required to reach market weight or condition, and thereby reducing the "overhead" cost of maintenance. Less TDN was required to produce the final product.

Later, USDA workers (Winchester et al., 14) used numerous sets of identical twin calves to study the possibility of "interrupted growth." One

FIGURE 1. Winter gain and spring body size of heifers as affected by low vs. high level feeding.



Two-year-old heifers after two successive winters on a very high level of nutrition. Actually gaining in body weight (182 lb.) while bearing their first calves, these heifers have produced fewer live calves than low level females.

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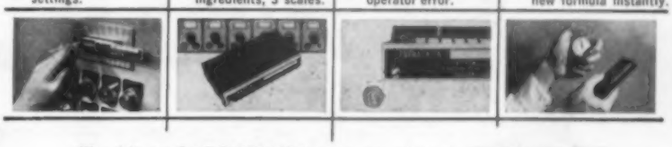

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TABLE 1. Weight Gains of Beef Heifers Wintered at Different Levels.

Winter feed level	Low	Moderate	High	Very high
Number heifers per lot	15	15	15	15
Average weights (lb.)—				
Initial (Fall, 1957)	458	457	459	457
Winter gain	23	124	135	268
Summer gain	320	265	255	167
Bred yearlings (Fall, 1958)	801	846	849	892
Net yearly gain (lb.)	343	389	390	435
Supplemental winter feed (lb./day)—				
Cottonseed meal	0.1*	2.0	2.5	
Ground milo		1.4	4.2	
65% concentrate mix				20.9

*Average of entire winter. Heifers received only 1 lb. cottonseed meal for a short period in mid-winter.

member of each pair was fed to make rapid gains; the other limited to gain little or nothing for a 6-month interval. Following this period, both twins were fattened to approximately the same weight and condition. Although more time was required for the retarded twins, they demonstrated a remarkable ability to recover and high efficiency of feed conversion. When the entire experimental period was considered, TDN per pound of gain varied only slightly between the two twins treated differently. Carcass composition was essentially the same when slaughtered at about the same weight.

With the growing and developing heifer, low levels of wintering might be recovered on cheap summer grass and such a practice would be desirable if mature size, time of conception, percent calf crop and weaning weight of calves are not affected.

TABLE 2. First Calving Performance of Two-Year-Old Heifers (Summary of 3 trials).

Supplemental feed level	Low	Moderate	High
Number heifers	43	43	43
Average weights (lb.)			
Fall—1½ years of age	804	844	883
Winter gain	—90	—44	—7
Summer gain	201	150	128
Fall—2½ years of age	915	950	1004
Calving difficulty score*	2.7	2.8	2.9
Average calving date	3/10	2/28	2/21
Calf crop weaned (%)	69	78.6	78.6
Average birth weight (lb.)†	68	72	74
Average weaning weight (lb.)†	353	385	397
Total feed cost per heifer at 2½ years (dollars)	47.87	66.51	92.81

*1—normal birth unassisted, 7—difficult birth with both heifer and calf lost.
†Birth weights corrected for sex, weaning weights corrected for age and sex.

In the fall of 1948, a series of studies with beef females were undertaken at the Oklahoma station (15, 16). Starting with spring-dropped heifer calves at about 7-8 months of age, different feeding levels were practiced during successive winters, allowing the females to make whatever recovery was possible on good summer pasture. The cattle grazed bluestem pastures, year-long, with supplemental feed from late October to mid-April each year. All females were pasture mated from May to August, so that calving was largely accomplished in February and March. Ample pasture was made available throughout the year so that lack of sufficient forage would not be a complicating factor.

Essentially, three wintering levels have been practiced: Low (1.0 lb. or less of cottonseed meal pellets per head daily), Moderate (2.5 lb. cottonseed meal), or High (2.5 lb. cottonseed meal plus 3 lb. grain). Some variation in these feed levels has been made as the trials progressed to produce the desired amount of winter gain or loss. To date, over 500 females have been involved in these studies, including tests with fall-calving cows and identical twin heifers. Most heifers were bred to calve first as two-year-olds.

The effects of low wintering regimes have been most severe on the growing and developing heifers. Though actually losing in body weight from fall to spring, weaner heifers have continued to grow skeletally, a phenomenon observed earlier by several workers. Body measurements taken at 6-month intervals show that wide differences in weight gain during the winter have little effect on height, and only a slight effect on length and width. The latter are known to be slower developing parts of the skeletal system, and thus more sensitive to nutritional levels. A typical picture of winter gain as it affects skeletal development among a group of heifer calves is shown in Figure 1.

"Remarkable Recovery"

With ample summer pasture, remarkable recovery has been possible among poorly wintered heifers. Data shown in Table 1 are typical of the results noted in several trials. Here comparable groups of weaner heifer calves were fed different amounts of supplement so as to gain very little (low level) vs. moderately, rapidly or as fast as possible. Differences of 245 lb. in spring weight between low and very high level heifers were reduced to only 92 lb. by fall. Winter gains may be largely a matter of lean and fat tissue development at the higher feeding levels, and may be largely recovered during the subsequent grazing season.

What is the effect of these differences in growth on calving performance in young heifers? Table 2 shows a summary of 3 trials in which heifers were wintered for two consecutive years at low, moderate and high levels. Winter weight losses while pregnant and calving as two-year-olds were directly related to the amount of supplement fed. Average calving date was delayed for low and moderate level heifers, a reflection of

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TABLE 3. Performance of Beef Cows Wintered at Different Levels (10½-year summary).

Supplement fed	Low — 1 lb. C.S. meal	Moderate — 2.5 lb. C.S. meal	High — 2.5 lb. C.S. meal + 3 lb. oats
Number started on test, 1948	30	30	30
Number remaining, May, 1959	27	21	18
Average winter weight change (lb.)—			
1st winter	+22	+59	+88
2nd to 5th winters	—153	—119	—92
6th to 11th winters	—130	—131	—109
Mature weight, Fall, 1957 (lb.)	1163	1118	1181
Average calving date, March	16	9	7
Calf crop weaned (%)*	94.3	87.4	86.7
Average weaning weight (lb.)†	490	477	481
Cow cost per cwt. calf weaned (dollars)	7.28	10.70	14.25

*Based on cows exposed to bull each year and calves weaned following year.
†Corrected for age (210-day equivalent) and sex.

TABLE 4. Performance of Fall-Calving Cows Wintered at Different Levels (4-year summary)

Supplemental feed level*	Low — Control	Low — Calves creep-fed	High — Control	High — Calves creep-fed
Total number of cows	69	62	69	69
Average winter weight change (lb.)	—245	—291	—225	—239
Average summer gain (lb.)	218	246	203	218
Calf crop weaned (%)	86.2	83.8	89.6	89.6
Average weaning weight (lb.)†	469	556	516	568
Total feed cost per cow-calf unit (dollars)	33.07	58.17	53.21	77.97
Return over feed cost (dollars)	68.41	66.08	60.91	49.62

*Low level cows received 1½ lb. C.S. meal, high levels 2½ lb. C.S. meal + 3 lb. corn or milo. Creep-fed calves consumed about 880 lb. feed each.
†Corrected for age (260 days) and sex.

their nutritional condition when exposed to the bull. There was little difference in conception rate, but a lower percent calf crop weaned for heifers on the low level. While difficulty at first calving due to winter feed level varied among the trials, in one trial rather severe losses were encountered at the low level. However, birth weights were significantly reduced by low feed levels, thus tending to compensate somewhat for reduced size of the heifer. Weaning weights were directly related to the plane of nutrition of the heifer during the two previous winters. However, when feed costs were considered, low and moderately wintered heifers produced 100 lb. of calf at weaning at cheaper cost than high level females.

These heifers have continued on test, returning to their designated feed levels each winter. It has been apparent that as the heifers approached mature size, effects of different amounts of winter supplement become less detrimental. Low level heifers require longer to reach mature body size, but are only slightly smaller at maturity than those fed more liberally each winter. The effect on weaning weight of calves tends to disappear.

Successive Years

What about successive levels of wintering on the performance of mature cows, and their lifetime usefulness in the herd? Data covering 11 years have now been obtained with a group of 90 cows which were started on test in the fall of 1948 as heifer calves. A brief summary of essential information is shown in Table 3.

Winter gains as heifer calves were directly proportional to the level of supplement fed, as were losses as young, pregnant heifers and mature cows. Summer gains tended to compensate for winter performance, so that at maturity there was little difference in body weights among the cows treated differently in the winter. Measurements of skeletal size indicate that poorly fed heifers took longer to reach maturity. The adverse effect of poor winter feeding in delaying calving tended to disappear after maturity.

Two items of interest have developed from this project. One is survival of cows in this herd. Here, the only basis for removal of cows has been failure to calve or raise a calf for two successive years, or for disease or death loss. After 11 consecutive winters on test, of 30 cows which started each test group at low, medium and high levels, there remain 27, 21 and 18, respectively. One of the major reasons for greater loss of cows on the high level has been failure to conceive or raise a calf for two consecutive years.

Another item of interest is percent calf crop weaned, which include data for 8 or 9 calf crops. This has been 94.3, 87.4 and 86.7% for low, medium and high levels, respectively.

No significant trends have been noted in calf weaning weights as affected by winter treatment of the dam. Under the conditions of this study, the cows were re-bred on lush spring and summer pasture; thus conception rates were not lowered by poor winter feeding. When the actual pounds of calf produced (weaning × % calf crop at each level) are considered in light of feed cost of the cow, the cost has been 49% greater for the mediums, and 96% more for the highs than for the low level cows.

Factors to Consider

In evaluating these data, certain factors must be considered. In all trials, native grass pasture has been ample, though of poor quality and low protein content during the winter. Under drouth conditions or on sparse range, more supplemental feed than used here would be necessary. Low level cows appeared to be better "rustlers" and grazed more actively than high level cows, whose nutrients were supplied largely by supplemental feed. No specific mineral or vitamin A deficiencies were believed to complicate these tests.

(Turn to NUTRITION, page 96)

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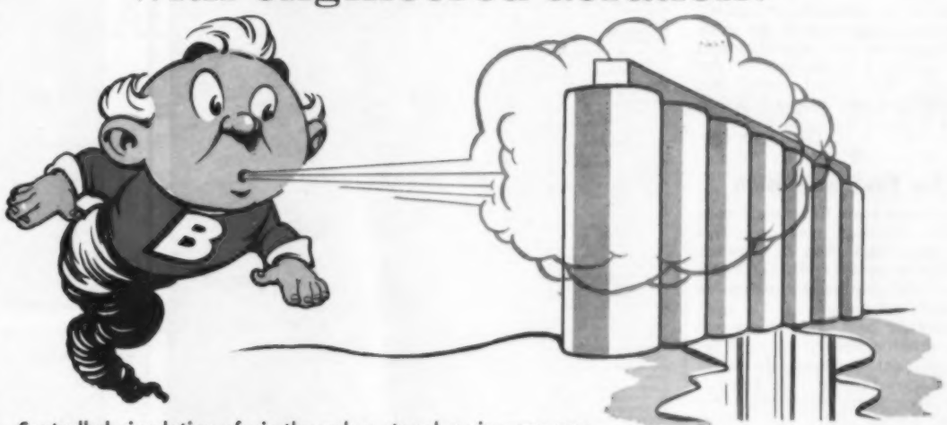

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Second-Year Layers

This season's low egg prices may influence some producers to carry old hens another year instead of starting a new group of replacement pullets. But this practice is questioned by S. L. Davis, extension poultry specialist, Alabama Polytechnic Institute, who notes that second-year layers are not always profitable.

He says old hens usually lay 20-30% fewer eggs during their second year than pullets and they eat about a third more feed for each dozen eggs produced. Also, old hens often are carriers of poultry diseases and are more susceptible to diseases during their second production year.

In comparing the feed cost of carrying old hens through a molt with the cost of a replacement pullet, about the only difference is the chick cost of the pullet. This is easily offset by the increased production of the pullet flock. "For actual profit," Mr. Davis says, "you will usually find that pullets will make the most money."

◆

Room for Beef Expansion

There's more room for expansion in beef cattle between now and 1975 than for any other class of livestock in the opinion of Prof. H. G. Route, University of Minnesota extension economist.

The need for beef in 15 years will be 50% greater than it is now because of population growth. In actual numbers, according to U.S. Department of Agriculture estimates, there will need to be about 108 million head of beef cattle on U.S. farms by 1965 and 127 million by 1975 to meet food demands. On Jan. 1 of this year the number was 97 million.

◆

Automatic Hog-Feeding

A roof over an automatic swine-finishing system is a wise investment. Researchers at the University of Illinois point out that shelter keeps ice off the floor in winter and shades the animals in summer.

Prof. D. G. Jedele, extension agricultural engineer, suggests separating the feeding area from the resting area. Experiments with automatic hog-feeding designs have shown that hogs will drop most of their manure outside the resting area if they are forced to move out for their feed.

He says the farthest side of the resting area should be within 12 ft. of the dunging area. Fewer than 100 pigs for each pen seem to work best.

For high-pressure cleaning with water, the concrete floor of the dunging area should slope one half inch per foot and should have a uniform, dense finish with a non-slip surface. A rough surface hinders washing. He advises designing the floor so that the waste material will wash over the outer edge and drop out of the stream of water.

Prof. Jedele recommends one waterer for every 25 hogs, one feeder hole for every four hogs for normal feeding and one feeder hole for each hog on limited feeding.

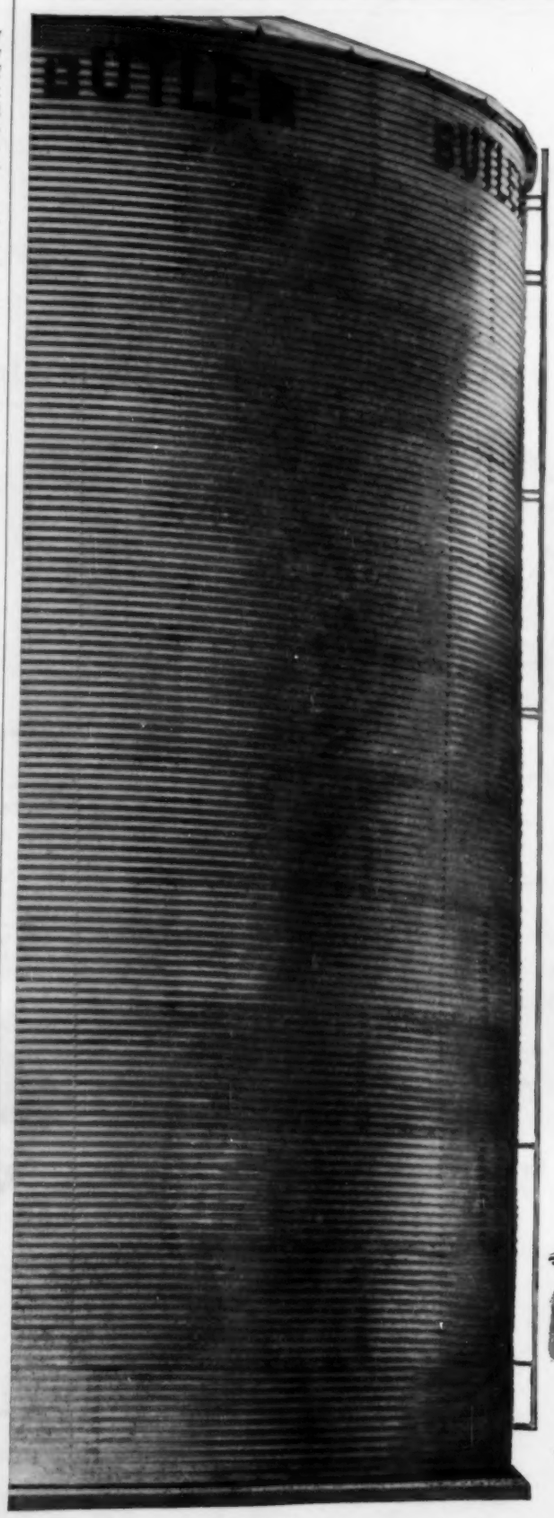
◆

Bulk Bin Planning

Several points which should be kept in mind before a bulk bin is actually constructed were noted recently by Prof. A. V. Krewatch, University of Maryland College of Agriculture.

In determining the size of bins to build, at least four different factors should be considered: Amount of feed fed a day or week, interval of feed delivery or home grinding of feed, size of economical delivery from the feed dealer and a margin of safety to provide for emergencies.

He says the economical size of delivery in specific localities may determine the size bin rather than the



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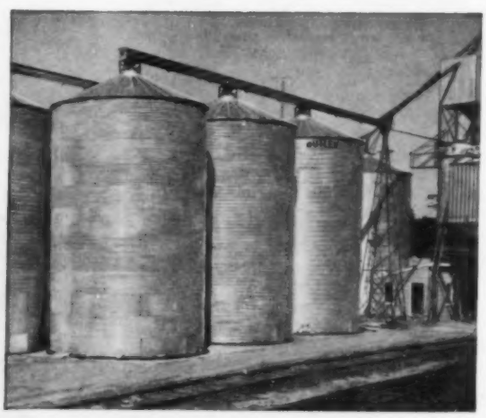

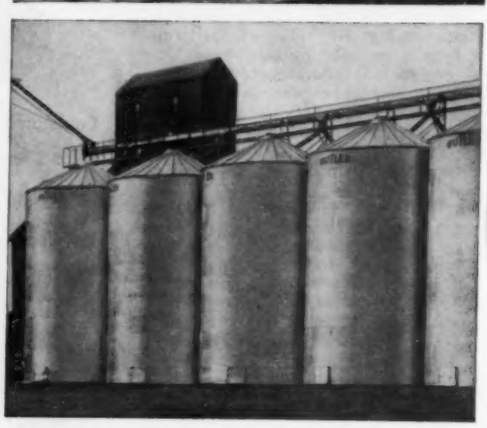

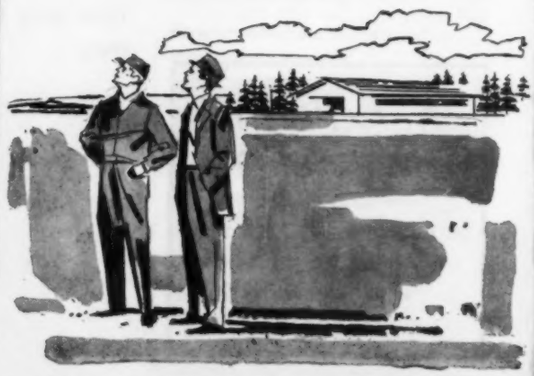

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amount of feed fed each day or the interval of delivery. Some feed dealers insist on making a complete load delivery, which in some cases is as much as six tons. This may also mean a price reduction.

The safety margin provided for emergencies such as non-delivery due to bad weather, exhausted supply, mechanical failure and others should require at least 30% additional bin capacity, according to Prof. Krewatch.

Bin volume required for different types of feeds and grains varies widely, Prof. Krewatch states. The requirement for dairy feed is approximately 80 cu. ft. for a ton of feed, while a space of only 40 cu. ft. is needed for storage of one ton of wheat.

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Pipeline Milk Meter

Good results have been obtained in tests on an automatic meter in a pipeline milking system, and it looks like record-keeping dairymen may be able to run milk from the milkers in the stall or parlor directly into the bulk tank, thereby saving a lot of pail-lifting.

Testing the meter is the Ontario Agricultural College, whose dairy department head, Dr. D. M. Irvine, says, "Weights proved accurate within one quarter of a pound in a four-breed test, and because the meter is part of the milk pipeline, no air or dirt can get into the milk during weighing."

Besides recording milk weight, the machine also is equipped with a sample cut which gives representations of individual fat content.

The meter, which fits between the pipeline and the milker, has four basic parts—upper shell, lower shell, balanced central pan and a recording apparatus. Weight is registered by the flow of milk in four-ounce intervals which causes a tipping action of the pan.

Feed Dealers' Profits Before Taxes Estimated

SAN FRANCISCO—Retail dealers of feed and fuel enjoyed a net profit before income taxes last year estimated at $6.37 for every $100 in gross sales, according to Ed Voss, president of Associated Business Services, San Francisco.

The estimate is based on tabulations from a selected national sample of firms made by Mr. Voss and his associates in the Accounting Corporation of America. The figures were published last week in the Barometer of Small Business for 1958, published by the ACA. The research covers firms doing an average annual gross volume of $50,000 to $100,000 in sales.

According to Mr. Voss, the feed and fuel dealers realized a gross profit of $16.69, and the cost of sales averaged $83.31. The average firm's individual breakdown of costs ran as follows: Fixed expenses, totaling $3.78, were broken down as: Rent, 75¢; utilities, 64¢; insurance, 47¢; taxes and licenses, 66¢; interest, 26¢, and depreciation, $1.

Controllable expenses, totalling $6.54, averaged: Labor, $3.01; outside labor, 2¢; operating supplies, 52¢; repairs and maintenance, 49¢; advertising, 44¢; car and delivery, $1.08; bad debts, 1¢; administrative and legal, 41¢, and miscellaneous, 56¢.

Darrel H. Lockwood

FIRST TRAINEE—Darrel H. Lockwood has joined Western Condensing Co., Appleton, Wis., as the first trainee of a new sales training program for its feed products division. Mr. Lockwood is a graduate of the University of Minnesota with a Bachelor of Science degree in agriculture. Charles F. Martin, director of sales, said the program was activated to keep pace with the firm's expanding Peebles' product lines.

Building Feed Mill

LONG GROVE, IOWA—Construction of a bulk feed mixing mill is nearing completion here. When finished it will serve a 25-mile radius, according to Ted and James Driskell, builders.

The mill will cost approximately $55,000 and will have a total daily production capacity of 80 tons. The firm will be known as Bulk Feeds, Inc.

OPENS FEED STORE

ORMSBY, MINN.—Harold Kuehl has opened a farm supply store here under the name of Kuehl's Feed Service in the building formerly occupied by Mulso Feed. Mr. Kuehl will handle Larro Feeds. He is also raising chickens for hatcheries. Ray Mulson, who owned Mulso Feed, is confining his operation to a store in Sherburn, Minn.

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Choose any size combination . . . Butler Giant Bins come in a wide range of sizes. This lets you build storage to *fit your specific needs*. It's easy to segregate, condition and store various types and grades of grain. Hotspots can be controlled by moving only a few hundred bushels, instead of many thousands.

Get better Butler construction . . . Butler Giant Bins are designed and built of extra-heavy galvanized steel to contain the tremendous pressures of stored grain. Bin-for-bin and bushel-for-bushel, Butler Giant Bins are heaviest in the grain bin industry . . . designed and engineered for safest storage and long life.

Buy Butler versatility . . . Butler Giant Bins permit segregated storage at low cost. And, because of bolted construction, they can be relocated – where and when you want.

If you need big, low-cost grain storage, get the facts on Butler Giant Bins before you spend a dime! For complete details fast, contact your nearby Butler Dealer, Butler Builder or Butler Contractor. Or if you wish, write directly to us at the office nearest you.

Diameter	Height (eave)	Capacity* (bushels)
21	18'8"	5,700
21	32'	9,600
24	16'	6,700
24	18'8"	7,700
24	21'4"	8,700
24	24'	9,700
24	32'	12,700
24	40'	15,700
36	24'	22,700
36	32'	29,600
36	40'	36,400

*Maximum capacity is determined by adding grain compaction factor, based on 60# wheat or beans to cubic measure, and filling under roof above eave. Compaction factor will vary by the test weight, type of grain and depth of grain stored.

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Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

The Vitamin B_6 Requirement of Chicks

● H. L. Fuller and P. E. Kifer, University of Georgia, Poultry Science, Vol. 38, No. 2, March, 1959, pp. 255-260.

ABSTRACT AND COMMENT

Several experiments using both practical type corn-soy rations and "purified" Cerelose and Drackett protein diets have been conducted by the Georgia workers to determine if there is a need to add supplemental pyridoxine and possibly several other so-called "minor" water-soluble B-vitamins to feeds for modern broiler chicks.

In general, the results so far seem to indicate that when chicks were fed corn-soy basal diets, both in batteries or large-scale floor pens, a fairly consistent increase in growth rates in pyridoxine supplemented diets was secured which failed to achieve statistical significance. When other "minor" B-vitamins such as para-amino benzoic acid, folic acid and inositol collectively, or with biotin, or with all four, were added to the unsupplemented ration, no response was noted. However, when these four vitamins plus pyridoxine were present, the chicks were again heavier, but not statistically so. The basal corn-soy diet contained approximately 2.5 mg. of vitamin B_6 per pound and was fed with and without added pyridoxine HCl at the 2 mg. per pound rate, in the 23% protein ration at 940 or 980 productive calorie levels.

Work with purified rations showed that the vitamin B_6 requirement for maximum growth response was approximately 1.5 mg. per pound. The requirement for maximum hatchability on purified diets for breeder hens was at least 2.5 mg. per pound, according to a previous report by Fuller and Field (1958). Deficiency symptoms of chicks fed low levels of pyridoxine exhibited typical symptoms as characterized by excitability, prostration and ataxia as early as eight days of age, suggesting that there was a low level of storage of the vitamin at time of hatching.

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Timely and Worth Noting

FURADROXYL AS A GROWTH STIMULANT IN BROILER DIETS; R. D. Creek, M. Y. Dendy and S. W. Hinners, Southern Illinois University, Poultry Science, Vol. 38, No. 1, January, 1959, pp. 145-148.

Three trials were conducted to determine the growth promoting effects, tolerance levels and toxicity of a new and as yet unapproved nitrofuran drug (5-nitro-2-furaldehyde-2-(2 hydroxyethyl) semicarbazone) known as Furadroxyl.

Feed efficiency and weight gains were both improved significantly by the addition of Furadroxyl at a level of 10-20 gm. per ton to a conventional 22.5% (calculated) protein broiler diet containing 5% added animal fat. The improvement in growth rate was of the same order as obtained by the addition of 10 gm. per ton of Aureomycin to the same basal diet, with feed conversions being improved slightly more by the Furadroxyl (non-significant).

The drug could be tolerated in the diet up to a level of 200 gm. without harmful effects as measured by growth—but 400 and 800 gm. levels both caused decreased growth rates.

A slight growth depression resulting from the use of nitrofurazone at 50 gm. per ton level to the basal diet was overcome by adding either 10 gm. of Aureomycin or 10-25 gm. per ton of Furadroxyl in most groups.

It should be pointed out that coccidiosis was not a problem in this experiment. It has been previously reported that in some cases the addition of coccidiostats to a ration used in clean environments may result in some growth restriction of birds (Berg et al 1956).

Dr. Salsbury's Sets Short Course Dates

CHARLES CITY, IOWA — Dates for the summer series of poultry short courses offered by Dr. Salsbury's Laboratories, Charles City, have been announced by the firm.

The four-day courses, which begin at 1 p.m. Monday and continue through noon of the following Friday, cover poultry management, sanitation, disease prevention and control and other problems of interest to the poultry industry. Tuition is $15.

Dates for this summer are: July 13-17, July 27-31, Aug. 10-14, Aug. 17-21, Aug. 31-Sept. 4.

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Research News AND Review

A roundup of scientific information prepared for the feed industry
Reprinted complete from AGRAData, Vol. 2, No. 2

Pfizer

Chronic Respiratory Disease of poultry

A sneezing bird starts it . . .

Chronic respiratory disease (CRD) in chickens was first described in 1943 (1) when natural outbreaks were observed in laying flocks. The etiological agent was isolated in embryonated chicken eggs and produced a variable mortality pattern and a diverse pathologic picture. The disease was reproducible in young chicks and mature birds when inoculated either with the egg-propagated agent or with the material obtained from naturally infected chickens. The cause of this specific disease entity was described as virus-like in nature.

Later reports of propagation of various field stains in embryonated eggs revealed that lesions produced in embryos were not as consistent in character as hemorrhages of the amnionic and yolk sac membranes.

Turkeys were found equally or more susceptible than chickens to the CRD agent under laboratory conditions. Comparative studies of CRD agent and the agent isolated from infectious sinusitis in turkeys revealed that the two agents appeared indistinguishable as determined by embryo, chicken and turkey inoculation.

Severity of the disease is influenced by climatic conditions. Frequently the symptoms were reported as appearing after exposure of the birds to either Newcastle disease or infectious bronchitis vaccines.

Natural outbreaks of the disease were readily identified by bird and embryo inoculation tests. Egg transmission of the agent among commercial flocks also was observed. Later it was demonstrated that egg transmission of the agent may be the primary source of infection for natural outbreaks of the disease (1).

Vaccination for infectious (1) bronchitis and Newcastle disease was not directly incriminated in this study as a stress phenomenon in precipitating CRD or increasing its severity in a flock. A higher incidence of CRD outbreaks among supply flocks produced by certain hatcheries was observed.

Later it was demonstrated that the spread of CRD could be attributed to egg transmission of the agent. Other reports have also contributed to the knowledge that CRD may be egg-borne.

Isolation of the CRD agent was first reported from Canada in 1951 (2). The disease was described as having a slow insidious onset accompanied by ill-defined respiratory symptoms. A virus has also been isolated which has been associated with the etiology of CRD (3). And at a later date the same workers claimed that PPLO is only part of the etiological complex of CRD and that almost all clinical cases of CRD are accompanied by PPLO infection, but the conuverse is not necessarily true.

It costs $25 million . . .

Economic importance of CRD infection of poultry has been emphasized repeatedly (4). The

Infectious sinusitis of turkeys. Top row: caseated unilateral sinusitis with extensive eye damage; bottom left: moderate unilateral sinusitis; center and right are of the same head, center, moderated bilateral sinusitis, right, lateral view of turkey showing encrustation and edema of the eye.

disease has been diagnosed in most of the important poultry-rearing sections of the United States and has also been found in other geographically widespread areas such as Israel and Australia. Within recent years the occurrence of the disease among broilers and adult fowls has been recognized more frequently. Significant economic loss has resulted in broiler-growing sections. In many areas, substantial percentages of breeding flocks are infected (5). In a limited serological survey, limited to a small number of farms, it was shown that there is an average of 80 per cent incidence of PPLO positive birds in the breeder flocks tested (6). The incidence of PPLO hemagglutination-inhibition antibodies in 320 flocks of various ages from Ontario to British Columbia of Canada was 63 per cent (7). It is conservatively estimated that losses to the American poultry industry as a direct result of CRD (8) now run to $25 million annually because of mortality, culls, prolonged feeding time and faulty carcasses of inferior quality.

Culprits by association . . .

It was shown (1) that the CRD agent could be propagated on artificial medium and because of its other properties, it has been suggested that the organisms might belong to the pleuropneumonia-like group. It was essential that the medium be enriched with serum or serum fraction to promote the growth of the CRD agent. This was subsequently shown by several workers. The CRD agent is presently referred to as a pleuropneumonia-like organism (PPLO).

Then, two Canadian workers reported the isolation of a virus which they considered to be associated with the etiology of CRD. This was followed by a report that PPLO is only a part of the etiological complex of CRD and that almost all clinical cases of CRD are accompanied by PPLO infection.

Several studies have been conducted on the organism population found in the various parts of the respiratory tract of the chicken. One group reported the differences in bacterial populations in normal and CRD infected birds (9). Regions studied were the nasal passageways, trachea and contents of pleural cavity.

The data obtained showed that there was a marked increase in bacterial numbers in these tissues in infected birds as compared with those from normal birds—on the order of 75 to 1; that there is a shift from a predominantly gram-positive to a predominantly gram-negative flora in CRD; and that this shift is due mainly to increases in coliforms.

Organism counts per gram from normal and CRD infected birds show a range of 32 to 180,000 or an average of 2,330 for the normal; and the per gram count from CRD infected birds shows a range from 640 to more than 1 million, an average of 164,000. The most striking observation was the significantly increased incidence of gram-negative organisms in the infected birds. Forty-five of the 55 specimens from the infected birds were host to species of one or more of the following genera: Escherichia, Aerobacter, Proteus, and Pseudomonas. The predominant species was **Escherichia coli** which was present in 40 of the 55 specimens.

Symptoms are only a clue . . .

When CRD becomes active in a flock the condition is characterized by nasal discharge, respiratory rales, persistent hacking cough, slow rate of spread throughout the flock, persistency of symptoms, reduced feed intake, moderate to severe decline in egg production, and body weight loss.

It is stressed that symptoms of CRD, as seen in mature chickens, cannot be easily distinguished from those symptoms resulting from infectious bronchitis and Newcastle disease. Mature birds develop symptoms sooner than young birds after experimental inoculation and are regarded as more susceptible (1).

A marked thickening of the air sac membranes and massive accumulation of caseous pus in the air sac cavities were described. This disturbance is reportedly as unrelated to other common respiratory infections in chickens, but was considered closely related, if not identical, to infectious sinusitis in turkeys.

The disease which might appear annually on the same farm can be noted in birds on the range and in the laying house, but is observed usually in the laying house.

Reportedly, the CRD agent is capable of producing specific gross lesions in embryos that are in terminal stage of incubation. Caseous exudate is observed in trachea, bronchi, and lungs. Air sac membranes are thickened, opaque, and coated with caseous exudate. The disease is readily reproduced in chickens, turkeys and eggs.

Mild to relatively severe conjunctivitis may be observed. A fibropurulent exudate coating the liver and a fibrinous pericarditis is reported (1 & 10).

The persistency, for many months, of respiratory symptoms has caused many workers to consider affected birds as permanent carriers.

Air-borne infection and contact transmission probably take place. Considerable evidence has been acquired to show that the infection, produced by PPLO, is transmitted through the egg in breeding flocks. Workers also report that after stresses, such as vaccination against Newcastle disease and infectious bronchitis, CRD frequently results. This might exemplify the persistency of the masked, low-grade type of infection which develops into clinical symptoms following stresses of climate, management and other disease outbreaks (1).

Diagnosis is involved . . .

Differential diagnosis between CRD and other respiratory diseases is almost impossible in the field. Presence in the flock of a respiratory disease with protracted course and symptoms of swollen faces in some birds is suggestive of this ailment (11). It generally requires supportive laboratory analysis in order to properly diagnose the occurrence of CRD in the flock.

IN THE LABORATORY detection of PPLO infection during life can be accomplished by tracheal cultures and by blood tests. The former is one of the better methods, but is complicated and expensive (12). There are four blood tests: the hemagglutination-inhibition test (7), and the whole blood, serum plate, and tube agglutination tests (12). A serological approach to the diagnosis of CRD is suggested by the fact that avian PPLO are able to agglutinate fowl red blood cells (rbc) and that this reaction can be inhibited by sera from birds infected with this agent (7). While this does not suggest that PPLO are involved directly in the etiology of CRD, it is evident to those engaged in work on this disease, that PPLO are almost constantly associated with this condition. Results of blood tests usually agree on a flock basis, but not on individual birds. A combination of blood and cultural tests is advisable (2).

Conjunctival lesions observed in chickens with chronic respiratory disease. Upper picture is normal control. The conjunctivas have been dissected away to reveal the hemorrhagic areas.

In the diagnostic laboratory, inoculation of chicks to observe the symptoms and the incubation period is important. Turkeys also may be used as experimental hosts. Inoculation into the infra-orbital sinus of turkeys results in sinusitis. The ensuing sinus exudate may be used to initiate embryo inoculations. Isolation of the agent also may be accompanied by using the exudate from the lower portion of the trachea from an infected chicken as the inoculum. Serological procedures may be used to aid in diagnosis.

The history of the flock, the incubation period in inoculated chicks, the behavior of the agent in embryos, the susceptibility of the turkey, and reaction of the agent to antibiotics are important considerations in making a diagnosis (5 & 13).

The inoculation of infectious material into sinuses of turkeys is followed by a typical sinusitis. This is considered by most workers as good evidence for the presence of chronic respiratory disease. The isolation of PPLO in chick embryos or **in vitro** establishes the diagnosis without question (5).

Canadian workers have offered a control plan utilizing the hemagglutination-inhibition test. This plan is based on testing breeding flocks to prevent the spread of the PPLO through hatching eggs, thus helping to select PPLO-free breeding stock (14).

It appears that the PPLO HI (hemagglutination-inhibition) test, using a single strain of PPLO as antigen, can be used either for following the course of infection in birds affected with CRD or for diagnostic work. This does not necessarily imply that PPLO are the cause of CRD. Present data supports the observations that recovered, or symptom-free, birds are still carriers of PPLO. This suggests the possible mechanism of egg transmission through persistence of the PPLO in recovered birds. However, it would be impossible to conclude that PPLO HI antibodies are a measure of immunity.

The major value of this test would appear to lie in the ability to determine the presence or absence of CRD in laying flocks, although interpretation of titers must be tempered with good judgment until further results are available as to the persistence of antibodies following infection. Results should be interpreted only when coupled with serological tests for infectious bronchitis and Newcastle disease (3 & 7).

Similar diseases compared . . .

The histopathological patterns of spontaneous and experimental Newcastle disease, infectious bronchitis and CRD have been compared (15). The differential features, based upon 79 field consignments, were restricted to the trachea and lungs. In the trachea, Newcastle disease was characterized by epithelial hyperplasia, whereas in infectious bronchitis and CRD the subepithelial connective tissue showed moderate to marked thickening due to mononuclear cell proliferation. Marked tubular prolongation of the mucous glands and hydropic degeneration of the epithelium were considered to be indicative of CRD. The mucosal thickening produced by infectious bronchitis was often ten times the normal or approximately twice the average thickening in Newcastle disease. Focal interstitial pneumonia was characteristic of Newcastle disease. The lung involvement in infectious bronchitis was restricted largely in the walls of the larger bronchi. Three types of lung involvement were found in CRD: (a) lymphoid hyperplasia, especially related to the tertiary bronchi; (b) exudative pneumonia; (c) giant-cell-surrounded granulomas. The latter reaction was considered highly characteristic but required further differentiation from aspergillosis. In the lung lymphoid response due to Newcastle disease was relatively mild compared to CRD. Visceral lymphomatosis in these organs occasionally presented a problem in differential diagnosis.

Parallel studies were made to differentiate further the overlapping histologic patterns of the three diseases by injecting isolated groups of 63 day-old chickens with the respective agents into the trachea, infra-orbital sinus, and anterior chamber of the eye, respectively. The experimental development of each disease was followed by collecting tissues at approximately three-day intervals for a two-week postinoculation period. Significant change was found in the trachea by the second day after Newcastle disease and infectious bronchitis inoculation. After the development of the characteristic inflammatory pattern of each disease, the mucosa showed restoration by the 12th day. The mucosa presented mild and transient changes in the CRD group; the response was delayed to the 5th day, and normal reversion was seen by the 9th day. No deviations from the respective field case descriptions were found in the lung, except in CRD where the response was confined to lymphocytic aggregates observed in the Newcastle disease group on the 7th and 12th days. The injected sinus presented little response to infectious bronchitis and a transient reaction with regression by the 7th day in the Newcastle disease group as contrasted to progressive subepithelial infiltration produced by CRD to the termination of the 16th day. The eye showed a sensitivity pattern similar to that of the sinus.

Management—1st offensive . . .

Observations made in the field, and investigators' inability to produce in the laboratory the entire picture of CRD as it occurs in nature suggest that various factors have a part in starting severe outbreaks—extremes of climate, lack of

sanitation, mismanagement, or other disease outbreaks. Sometimes it seems that Newcastle disease, infectious bronchitis, and vaccination against these diseases provoke CRD. CRD may be spread to healthy flocks by introducing apparently healthy carriers as flock replacements or by putting clean and infected flocks close together on the same premises. The unusually long duration of the disease once it has gained access to a flock makes its spread more certain.

The disease may be transmitted from infected hens to the chicks through the eggs. The agent causing CRD has been recovered from young cull chicks. CRD has been observed in chicks hatched from eggs laid by infected hens and maintained in isolation about 15 weeks. Although this suggests that transmission by eggs is related to outbreaks in growing birds, the true importance of this means of spread has not been determined. The presence of CRD organism in incubator eggs that are pipped but do not hatch at the usual time indicates that incubator transmission likewise may have an undetermined part in the general dissemination of the disease.

The course and severity of CRD reflect environmental factors and the individual status of the exposed bird. Aside from the slow rate of spread and tendency toward chronicity, CRD in many respects seems similar to Newcastle disease and infectious bronchitis.

The numerous stress factors — climatic extremes, improper sanitation and management and concurrent bacterial, viral and parasitic diseases that may initiate a severe outbreak of CRD as well as the chronic nature of the disease—emphasize the need of adequate sanitation and management throughout the growing and laying period.

Birds should be raised in properly ventilated houses that provide adequate protection against extreme variations of temperature. Overcrowding should be avoided. Litter, whether fresh or built up, should be dry and crumbly. Waterers and other equipment should be cleaned and disinfected (with a two per cent lye solution) periodically. Houses should be thoroughly cleaned and disinfected after one flock has used them and before another flock is put in them (10).

Prevent CRD invasion . . .

The best way to control CRD is to keep it out of clean areas and flocks (10). Replacements should never be obtained from an unknown source or from a flock with a recent history of respiratory disease because of the danger of obtaining an apparently healthy carrier. Baby chicks should be obtained from a reliable hatchery where healthy breeder flocks are maintained under constant supervision. They should then be raised in isolation. Eggs from flocks showing any active respiratory infection should never be set.

The numerous stress factors that may initiate a severe outbreak of CRD as well as the chronic nature of the disease emphasize the need of adequate sanitation and management throughout the growing and laying period.

CRD can be eradicated by marketing the entire flock immediately. If conditions favor less drastic methods, the flock should be kept well isolated and all birds known to be infected should be removed. Identification of infected birds is usually accomplished by physical examination of all birds in the flock and in a limited number of instances by the use of experimental blood tests. Unless extremely valuable birds are involved, the rest of the flock should be marketed as soon as that is possible. In either instance, the entire premises should be cleaned thoroughly and disinfected before new birds are bought.

A program preventing the parent-to-chick transmission of CRD associated with PPLO infection has been worked out.

Antibiotic injected into parent stock inhibited transovarian passage of PPLO for a period of 14 days commencing nine days postinoculation (6, 16 & 17). The offspring of these injected parents were brooded in small separated units, some on one farm. Vaccinations for infectious bronchitis and Newcastle disease were carried out at seven weeks of age—to arouse the CRD complex if it was present—using vaccines made from eggs of PPLO negative breeders. The response was very noticeable and lasted about two and one-half weeks. No birds died. Blood tests were taken at monthly intervals and all samples to date have been PPLO negative. These birds at the time of the report were 38 weeks old.

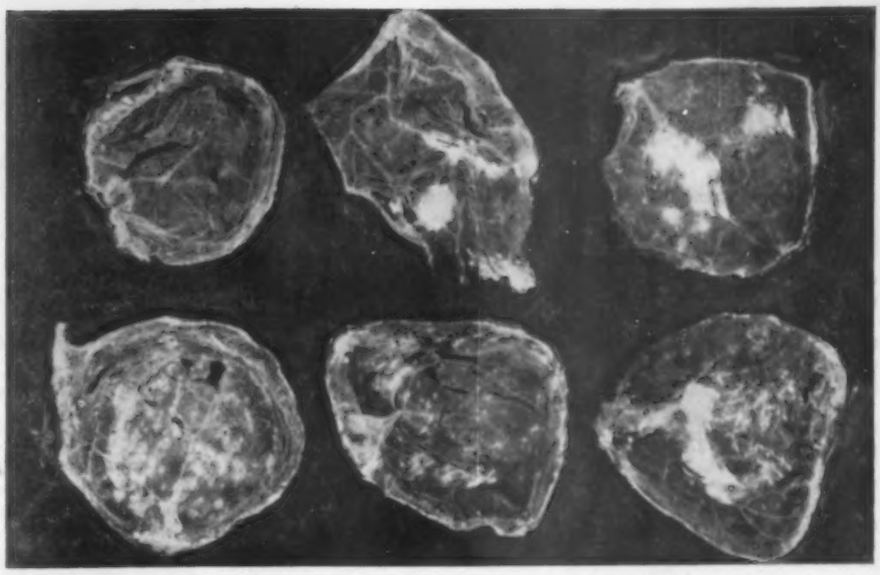
The offspring of the negative parents were blood tested at day-old and were negative at that time.

It is interesting to note that in previous tests of parents and offspring, PPLO positive breeders produced PPLO positive chicks at day-old. These trials show that PPLO negative breeders produce PPLO negative chicks at day-old, thus substantiating the evidence of parental transmission.

Treat birds that have it . . .

Many investigators have concluded that PPLO play an important role in CRD of chickens and infectious sinusitis of turkeys. It has been stated that both diseases—CRD and infectious sinusitis —are caused by the same agent.

Sixteen antibiotics were tested for their **in ovo** chemotherapeutic activity against the agent of infectious sinusitis and CRD. They found that only magnamycin, terramycin, aureomycin and streptomycin showed definite activity against the infective agent and concluded that magnamycin and terramycin were the most effective. The result of **in vitro** sensitivity tests on an avian strain of PPLO was reported and it was found that the drugs were effective in the following order of diminishing activity: magnamycin, terramycin, streptomycin, aureomycin, chloromycetin, neomycin and penicillin. They stated that magnamycin, terramycin, streptomycin and furazolidone were capable of destroying PPLO. Another group reported the effect of antibiotics and chemical agents on PPLO of avian origin. They stated that tetracycline and oxytetracycline were the most active antibiotics tested **in vitro,** while erythromycin and viridogrisim were the most effective drugs **in ovo.**



These lesions were observed with avian viruses: from top left, normal chorioallantoic membrane, infectious laryngotracheitis, fowl pox; from bottom left, chronic respiratory disease virus of chickens, chronic respiratory disease virus of ducks, and chronic respiratory disease virus of turkeys.

In vitro, oxytetracycline, magnamycin, and erythromycin were effective in inhibiting the growth of all the four PPLO strains under test. The concentration of the antibiotic required to inhibit the growth of the organisms includes: 0.5 to 50 mcg. per ml. for oxytetracycline; 0.09 to 3,000 mcg. per ml. for erythromycin; 0.5 to 100 mcg. per ml. for magnamycin. The wide ranges were the ranges needed to inhibit growth of the different mortality of the embryos with 90 and 88 per cent protection, respectively, at the 1 mg. level (18).

The effectiveness of an antibiotic increasing the survival time of embryos is in the following order of diminishing activity: erythromycin, oxytetracycline, magnamycin, chlortetracycline, streptomycin, and hygromycin.

In vitro, oxytetracycline, magnamycin, and erythromycin inhibited the growth of four strains of PPLO at different concentrations in another study. The microbiocidal activity of these three antibiotics was maintained at a much lower concentration for a period of 10 days than that of three other antibiotics (18, 19 & 20).

In experimentally induced CRD in chickens, mortalities by four weeks were: positive control, 54 per cent; treated with 500 gm. oxytetracycline, 2.5 per cent; the other treatment groups which included penicillin at 500 gm. per ton did not differ significantly from the positive control. Incidence of severe lesions was similarly distributed among the groups. The average four to eight-week gains of surviving birds were significantly higher for the negative controls and the 500 gm. and 100 gm. oxytetracycline groups than for the positive control group. Weight gains in all other groups did not differ from that of the positive controls (21).

or, Learn to live with CRD!

When the complexities of developing a prevention and control program are fully realized by the commercial flock owner, the result with many has been to "learn to live with CRD" in their flocks.

Supportive of this philosophy is the recent report by workers in this field. During a 40-week period the antibiotics—terramycin, aureomycin and penicillin—as supplements to an all-mash ration, at a level of 100 gm. per ton, have been fed to laying pullets suffering from a natural infection of chronic respiratory disease. Egg production was increased through the use of two antibiotics as compared with the control pullets. Average egg production for the various groups of pullets was: controls, 34 per cent; terramycin, 52.3 per cent; aureomycin, 49.9 per cent; and penicillin, 41.8 per cent. In only the terramycin and aureomycin supplemented groups were the increases in egg production statistically significant. When fed the antibiotic, feed required per dozen eggs was reduced, mortality reduced and body weights of pullets increased during the experimental period. Chronic respiratory disease symptoms were markedly relieved in all groups of birds fed the antibiotic, while respiratory symptoms persisted throughout the period among the pullets of the control group (22).

For additional copies of this article, write to Chas. Pfizer & Co., Inc., AGRAData, Agricultural Research & Development Department, Terre Haute, Ind.

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New Iowa Plant Specializes In Complete Pelleted Feeds

The increasing trend toward use of complete pelleted feeds for livestock is apparent in the design and operation of new feed manufacturing facilities at the J. H. Wake Feed Mill in Oskaloosa, Iowa.

The new plant is a predominantly automatic set-up specializing in production of complete bulk feeds in pellet form.

The firm, which has been in business in southeastern Iowa for 44 years, is headed by Joseph H. Wake. The plant manager is Phil Wake, son of the founder.

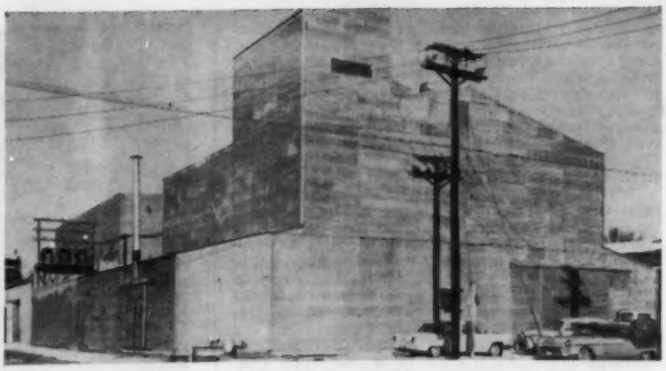
The new plant is actually an addition to a previously existing mill. It was built, explained Phil Wake, to meet a rapidly increased demand for bulk, pelleted feeds. The older section and its facilities are now used to produce sacked feeds.

The need for fast, efficient handling of grain in the manufacture of complete feeds was one of the factors in the design of the new plant, Mr. Wake noted.

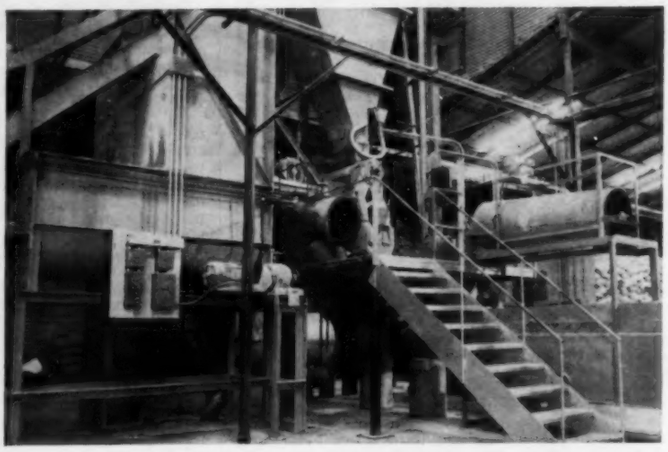
"In making complete feeds, especially complete hog feeds, a lot of grain is used, so we tried to set the plant up so that we could unload grain and grind it right into bins above our hopper scales with as little labor as possible," Mr. Wake said.

"The mixer man can let the grinder run all the time while he is mixing, and if the bins above the scales get full at any time, he will know because of the 'bintrols' located at the top of his bins in the batching system."

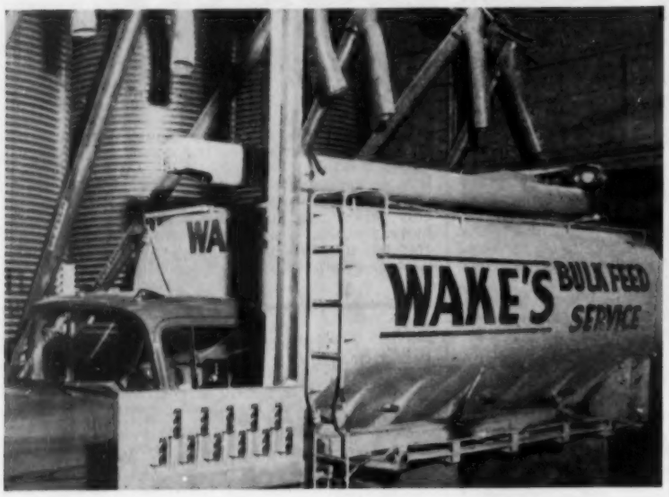
He said that this bin system, designed by De Vine Engineering of Cedar Rapids, has six compartment bins above the hopper scales, holding about 25,000 lb. in each bin. Material can be weighed into the hopper before mixing.



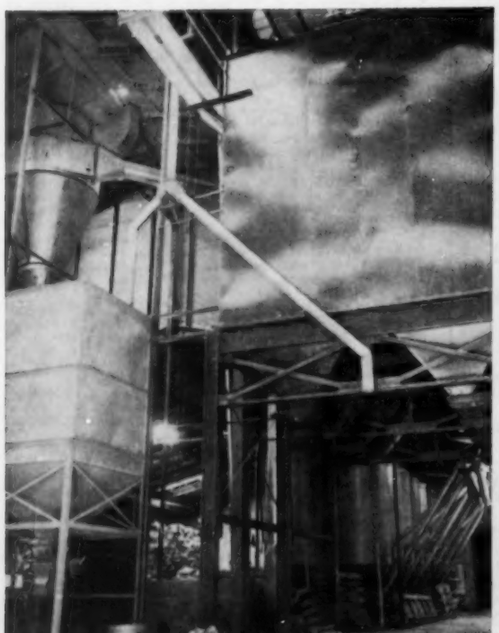
NEW MILL.—The steel building in the foreground is the new plant built recently by the J. H. Wake Feed Mill at Oskaloosa, Iowa, as an addition for its bulk feed manufacturing set up. The new structure—a 60x60-ft. steel building was raised from 16 ft. to 30 ft.—houses new grain bins, a hammermill, mixer, pellet machine and finished feed bins. The concrete block building in the background is used for producing sacked feeds and houses other mixing and pelleting equipment.



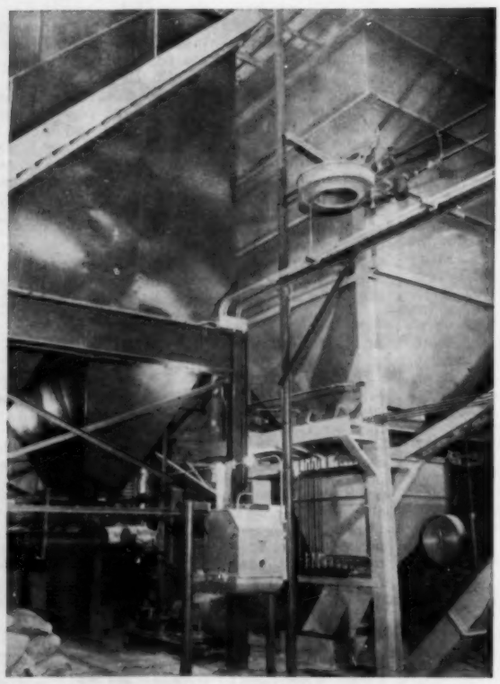
PELLET FACILITIES—This picture shows the Wenger 50 h.p., Multi-Duty pellet mill and horizontal cooler installed in the new plant of the J. H. Wake Feed Mill at Oskaloosa, Iowa. The new duster is also shown; when not in use, it is placed on a framework above the pellet cooler.



BULK DELIVERY—This picture shows the firm's original bulk truck (Baughman) and the bulk tanks with which the firm started in bulk two years ago. In the foreground is the push-button service farmers can use in loading their own trucks.



FEED BINS—The pellet cooler at the new J. H. Wake Feed Mill in Oskaloosa, Iowa, empties into an elevator leg that takes the finished pellets up to a scalper just before they empty into one of eight finished feed bins above a driveway (capacity 30,000 lb. each) where bulk trucks are loaded by gravity. The Butler bulk bins in the background are now being used for crumbled poultry feeds and custom mixes. On the left are a bin and sacker used as the need arises for sacked feeds.



BATCHING SYSTEM—Part of the new facilities recently installed at the J. H. Wake Feed Mill in Oskaloosa, Iowa, include the batching system shown above, hopper and hopper scales designed by DeVine Engineering Co., Cedar Rapids, Iowa. At the left, part of the new bins for receiving incoming grain is shown.

Capacity

"We can fill these bins either through our grinder or by dumping into the elevator leg. We designed the grinding, mixing and holding bins in this new setup to be able to run 100-120 tons in a nine-hour shift," Mr. Wake said. "The capacity at the present is limited to about six tons per hour, which is the capacity of the pellet mill (50 h.p. Wenger Multi-Duty).

Any time our tonnage increases, we can change the shaft and motor on our pellet mill and step this up to 10-12 tons per hour of pellets. We are operating this new set-up with two men, but one man can easily operate the mixing and pelleting with this arrangement, the plant manager explained.

Bulk Handling Increases

The firm installed bulk service in 1957 when it had a plant capacity of 50 tons a day, which at the time seemed adequate to meet the growing demand for pellets and bulk delivery in the Oskaloosa area and in the branch locations at neighboring towns.

However, business rose so rapidly—to the point where a large share of the feed manufactured was delivered in bulk—that further expansion was necessary.

To install the new equipment, a 60x60-ft. steel building was built up 14 ft.—from 16 to 30 ft.

The company has two plants in Oskaloosa—the original mill is devoted to custom mixing, farm supply store operations and general offices. The new operation, where the firm's Circle Brand feeds are made, is about two blocks away.

Are you wasting phosphorus?

- ☐ with out-of-date feeding recommendations
- ☐ over-fortifying with phosphates of low availability
- ☐ adding unnecessary margins of safety
- ☐ with too wide a calcium-phosphorus ratio
- ☐ assuming that all chemically processed phosphates are alike
- ☐ assuming that phosphates of inferior quality are satisfactory under "practical" conditions

Performance of today's poultry and livestock feeds simply leaves no room for phosphate sources that don't carry their full share of the nutritional load. Also, the end result of wasting phosphorus is a boost in formulation costs.

Yet the check list above indicates a number of ways that feed manufacturers may be wasting phosphorus.

Take for example, feeding recommendations based on phosphates that have been proven to be of low availability. Chemically processed dicalcium phosphates with proven high availability make such recommendations out-of-date.

These modern phosphates eliminate the need to over-fortify with phosphates of low availability. There's no need to add unnecessary margins of safety for inferior phosphates.

Important too, dicalcium phosphates are low in calcium. They end the problem of using phosphorus sources that contain excess calcium and hinder feed performance with too wide a calcium-phosphorus ratio.

Dynamic DYNAFOS delivers more available phosphorus in every pound

International's Dynamic DYNAFOS is a chemically processed dicalcium phosphate that delivers proven high biological availability and is low in calcium.

That's why each pound of Dynamic DYNAFOS delivers as much usable phosphorus as 2 to 9 pounds of unprocessed, raw phosphates.

You cut formulation costs because you actually need less Dynamic DYNAFOS. And unique beaded form makes handling and mixing better than ever. Write or wire your International representative for details.

International MINERALS CHEMICALS

"Creators of Living Minerals"

1-59R

FEED INGREDIENTS DEPARTMENT, PHOSPHATE DIVISION

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

Administrative Center: Skokie, Illinois

Sales Agents: EASTERN AREA: GRANDONE, INC., Needham (Mass.) • SUNSET FEED & GRAIN CO., INC., Buffalo • P. R. MARKLEY, INC., Philadelphia
A. G. GREENE COMPANY, Charlotte (N. Carolina) • EDWARD E. SMITH COMPANY, Atlanta • E. A. CARTER BROKERAGE COMPANY, Tampa
CENTRAL AREA: BULLARD FEED COMPANY, Chicago • GOOD LIFE CHEMICALS, INC., Effingham (Ill.) • JOHN F. YOUNG COMPANY, Cincinnati
R. D. ERWIN COMPANY, Nashville • CHAS. F. WILLEN CO., INC., Birmingham (Ala.) • STANDARD SALES COMPANY, Meridian (Miss.)
THE VITA PLUS CORPORATION, Madison • MIDWEST AREA: BLOMFIELD-SWANSON, Minneapolis • W. P. MANN SALES CO., Omaha
M. A. McCLELLAND COMPANY, Kansas City (Mo.) • B. A. LUCIUS COMPANY, Fort Worth • WEST COAST: JAMES FARRELL & COMPANY, Seattle
JAMES FARRELL & COMPANY, Compton (Calif.) • CANADA: N. D. HOGG LTD., Toronto

JOE BROOKS

BY AL P. NELSON

Humor Is a Precious Commodity

It was a hot day, and when Elmer Hoffman came in from the barn his legs felt as if they weighed 500 lb. each. He had been doing field work all day, and now with the help of his teen-aged son had just finished barn chores. His blue shirt was dark with sweat, especially where the suspenders crossed, and his face was dusty.

He entered the farmhouse through the basement door, took off his clothes, showered, and put on the clean khaki pants and sport shirt which his dutiful wife had laid out for him.

"Ah!" he said gratefully. "I feel a lot better now, even though my legs ache."

In this frame of mind he went upstairs, kissed his rosy cheeked wife and ate a big dinner. Then he went into the living room, sat in an easy chair and promptly fell asleep.

He woke up within an hour, feeling relaxed and refreshed and found that his wife had put the local weekly newspaper on his lap. He turned on a floor lamp, opened the newspaper and began reading.

Suddenly he laughed loudly and rather unrestrainedly. This brought his wife into the living room from the kitchen. Her face wore a look of wonder.

"Why, Elmer, I haven't heard you laugh like that for a long time! What's so funny?"

Elmer Hoffman chuckled. "Oh, it's that darn Joe Brooks, Nancy. He's got an ad this week which is very funny, I think. Especially some of the humor quotations. Sit down, I'll read some of it to you."

A wise wife, Nancy Hoffman sat down near her husband, even though some coffee cake was just about done in the oven. She knew this was one of the opportunities she had to share time and interest with her husband.

"Things to think about when you're drinking morning coffee, or relaxing in the easy chair after supper," Elmer Hoffman read from Joe's ad. "Little capsules of wisdom and foolishness which give a little flavor to one's day."

Mrs. Hoffman looked puzzled but said nothing.

"Now here come the capsules," Elmer chuckled.

"One farmer said the happiest day of his life came when they named a hurricane after his mother-in-law."

Mrs. Hoffman looked hurt. "Why, Elmer, you know Mother is always nice when she visits us. She helps me with all the work and—"

"I'm not thinkin' about her," Elmer explained. "She's okay—most of the time. But every man appreciates a joke about mothers-in-law. Most of them interfere so darn much. Don't take everything so personal."

He continued reading from Joe's ad:

"'If you wish to be remembered, leave a lot of debts.' I wonder if Joe put that in to speed up collections? Anyway it's a good one."

"Hard work is highly respectable, but you can never make it popular."

"It's time to think about sidedressing your corn with anhydrous. We have it, and we'll applicate it."

Elmer smiled. "That's advertisin', honey, but you can't blame Joe for slipping in a few commercials to try to pick up some extra sales. Funny, too, I was just thinking about putting

meet the men of THE RAY EWING COMPANY

who provide unsurpassed customer service to the American Feed Manufacturers

Ray Ewing
President

Jack Plonsky
Exec. Vice Pres.

Bill Ewing
Vice President

Kent Ewing
Vice President

Dr. Herb Wilgus
Vice President

Earl Reeves
East. Sales Mgr.

Hank Wilder
Reg. Sales Mgr.

Odey Foster
Sales Representative

Al Gustaveson
Sales Representative

Gary Ferguson
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Norris Nedela
Sales Representative

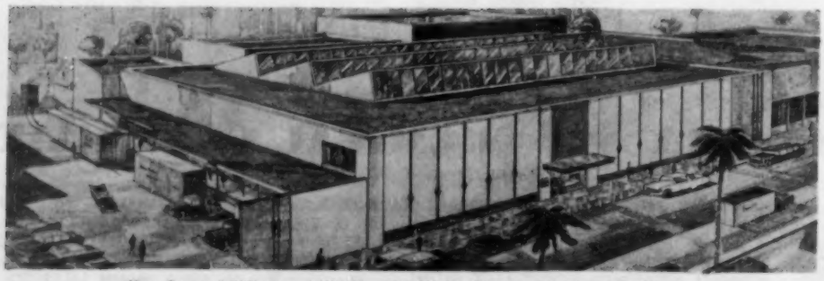
Red Harrison
Sales Representative

Alan Bader
Distributor

Bud Cook
Distributor

Walt Krumbholz
Distributor

Tommy Thompson
Distributor



New General Offices and Western Pre-Mixing Plant — Pasadena, California

TRY THE COLUMBUS heavy duty industrial ROLLER MILL AT OUR EXPENSE!

Endorsed by grain dealers, the Columbus heavy duty Roller Mill will roll all grains. Superior design, sturdy construction for years of profitable service. Four sizes—300 bushels, 600 bushels, 900 bushels, 1200 bushels per hour, with or without electric motor.

THREE MODELS:

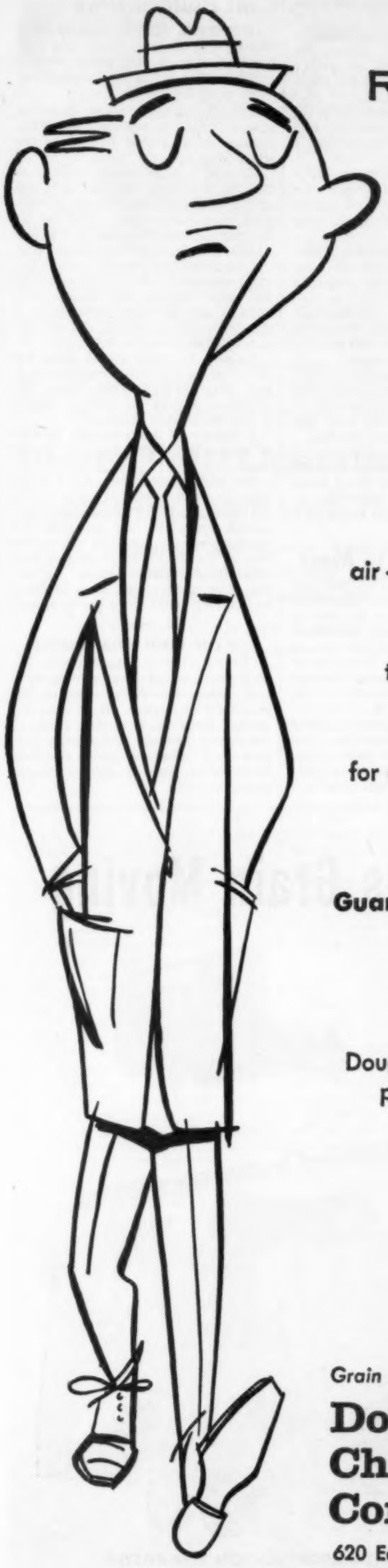
Trailer, stationary or truck mounted

Operate the mill 10 days. If not satisfied, return it. WE WILL REFUND YOUR MONEY AND PAY RETURN FREIGHT.

WRITE FOR PRICES

HENKE MANUFACTURING CO.

Columbus, Nebraska



Read why there's an air of certainty about men who protect their stored grain with a

Douglas
AERATION SYSTEM

Grain men know they've given their grain storage problems the air — and for good — when they install a Douglas Grain Aeration System. Why are they so certain? Here are the reasons.

Automatic Operation The Douglas System has an automatic temperature and humidity control. It makes sure your grain gets the *right* air at the *right* times . . . all by itself.

Here's how it works: when the temperature and humidity are best for aerating grain, day or night, the power unit is automatically turned on. When temperature or humidity is not at the proper level, it is automatically turned off. All you have to do is set the controls and forget it!

Guaranteed Performance Douglas guarantees — in writing — every one of its custom designed aeration systems to perform exactly as specified. Every piece of this system has been preproved in actual storage use. That's why Douglas can make this strong guarantee.

No wonder more and more grain storage men are looking to Douglas when they consider making an investment in such an important piece of profit-saving equipment. Douglas has 43 years of experience in the grain sanitation business. The result is a grain aeration system that has overcome the problems of previous systems . . . high cost and unpredictable results.

Why not get the *facts* today? See why Douglas Aeration gives you the most economical, most efficient grain aeration possible. Mail this coupon for full story . . .

Grain Aeration Division

Douglas Chemical Company

620 East 16th Avenue
North Kansas City, Mo.

Douglas Chemical Co., Grain Aeration Division
620 East 16th Avenue, Dept. F-F , North Kansas City, Missouri

I want the **full** story on **full storage profits** that are now possible with a Pre-Engineered Douglas Aeration System.

Name_____

Firm_____

Address_____

City_____ State_____

We have_____(number) bins of_____(flat, vertical) type, with about_____bushels capacity.

TRIP WINNERS—Two feed dealers from Virginia and Michigan recently won the merchandising contest sponsored by Chas. Pfizer & Co., Inc., for Wirthmore dealers in the Toledo division. The dealers and their wives received an all-expense-paid trip to Boston and New York, including a tour of the new home office and research center of Wirthmore Feeds, Inc., Waltham, Mass. The dealers are Joseph Heretick, Heretick Feed & Seed, Petersburg, Va., and Larry Hager, Fremont, Mich. Shown at the new Wirthmore office building are (left to right): Robert Emmons, Wirthmore general sales manager; R. F. McLeod, president of the firm; Mr. Hager; Mrs. Hager; Mrs. Heretick; John Sawyer, Wirthmore vice president in charge of distribution, and Mr. Heretick. The contest offered the tour for the largest unit increase and largest percentage increase in sales of feeds containing Pfizer's Terramycin.

in an order. The early bird—you know."

He went on reading.

"A good father who finds his son on the wrong track can always provide switching facilities."

"Confidence is the feeling you have before you know better." Elmer chuckled. "Isn't that a honey? And how true."

"A woman's lean years are her happiest." Elmer looked slyly at his wife.

"A millionaire is a man with enough lettuce to choose his own tomatoes."

"Too many people waste half their time finding ways to waste the other half."

"Want us to come out and talk with you about your hog feeding program? We'll be glad to do it. No obligation. Just call 7583."

Elmer chuckled. "Well, Joe doesn't slip in half as many commercials as those television stations do nowdays."

He continued reading:

"Hard times . . . When hitchhikers are willing to go either way."

"The worst bankrupt is the man who has lost his enthusiasm." "Now, Ma, isn't that the truth?"

Mrs. Hoffman got to her feet. "Elmer, I've got to take the coffee cake out of the oven."

She started moving toward the kitchen. Elmer followed her, newspaper in hand, and reading as he walked.

"Whether he winds up with a nest egg or a goose egg will depend a lot on the chick a man marries."

"Most middle aged men enjoy dancing if they can sit fairly close to the stage."

"For a man to be henpecked, he has to be a little chicken."

Mrs. Hoffman turned worriedly, a coffee cake in her hand. "Elmer, you aren't one bit henpecked, are you?"

"Well m-most times I don't think so."

"Most times! Why, Elmer Hoffman, you know you're the boss in this house. I run at your beck and call. I never henpeck."

Elmer coughed. "Well, dear, that's another subject. Let's not spoil the evening. Gee, I'll have to tell Joe to print more of these quips in some ads. I like 'em."

"Well, I don't," Mrs. Hoffman said. "He's got some jokes that are-well-maybe a little bit sexy. He shouldn't have those in there."

"Why not?" asked her husband. "Sex is a part of life, and when you talk about it openly now and then, it doesn't seem dirty, somehow."

"Elmer Hoffman!" said his shocked wife. "How you talk. Just suppose the minister came to our door and heard you." She hurried out the door and went to look at her flower garden.

"By golly," Hoffman chuckled, "I got a couple of dandy quips I could give Joe for his next ad. But I guess I don't dare. I already told them to Ma and she'd know I sent them in."

Wool Growers to Meet

SAN FRANCISCO—The 99th annual convention of the California Wool Growers Assn. will be held at the Sheraton-Palace Hotel, San Francisco, Aug. 13-14, according to an announcement by W. P. Wing, secretary-treasurer. The annual banquet and dinner dance with entertainment are scheduled for Aug. 13.

The convention and entertainment committee members planning this event are W. P. Rickard, Manchester, Cal., J. P. Laborde, Stockton, Cal., and Chet Wing, San Francisco.

750,000 Bu. Storage Unit Built in Iowa

HERNDON, IOWA—Central Iowa Milling Co., Bagley, Iowa, has constructed here a flat grain storage facility which has a total capacity of more than 750,000 bu.

Rolland Barnes, owner, had the structure built to replace a 15,000 bu. wooden elevator that burned on the site a year ago.

He said it may appear unusual to build such a large terminal on a site so far removed from a metropolitan area, and commented, "With all of the current consideration of the possibility of an atomic or hydrogen war, the metropolitan areas where the grain terminals are located would be inevitable targets for attack. The chances are very slim, however, that the Central Iowa Milling Co. terminal would be a target."

He said the bulk of the grain for the terminal will come from elevators and grain storage sites along the northern, eastern or western routes of the Milwaukee Railroad.

A feature of the terminal's service is on-the-farm sampling of stored grain.

Mr. Barnes said plans for a grain bank to service area farmers are in the early stages. The company will provide complete feed grinding and mixing services as well as a complete line of Purina Chow feeds and feed supplements. Future plans include, also, the construction of a grinding and mixing plant near the terminal.

GRAIN FIRM CHARTERED

DOVER, DEL.—Inland Grain Co. filed a charter of incorporation with the corporation department of the secretary of state's office here recently. Authorized capital stock of the firm is $300,000. Corporation Service Co., Delaware Trust Building, Wilmington, Del., is serving as the principal office.

Big LENNOX Batch Bin Keeps Grain Moving ...Quick Dries Without Baking

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Easy-to-load 9 ft. DRAG AUGER (1) takes grain to BOOT (2). BUCKET ELEVATOR (3) lifts to LEVELING AUGER (4). Open LEVELER TROUGH DOORS (5) admit grain to DRYING BINS (6). Built-in air cleaner removes trash lighter than grain. Powered METERING ROLLS (8) provide positive metering of grain to UNLOAD AUGER (9) for either recirculation or unloading.

LENNOX Industries Inc.
FARM EQUIPMENT DIVISION
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TALKING THINGS OVER—Wilmer Crouse (left), owner of Crouse Feed Mill, North Lima, Ohio, talks over a feeding problem with one of his customers. The firm offers its own brand, Superior Feeds, as well as Master Mix and Ful-O-Pep feeds to its customers. Most of the firm's volume is in poultry feeds.

Dealer Shifts Operation to Meet Customer Demand; Hikes Sales

Supervision and service, combined with recognition of the feeder's own ideas, spell success for custom mill operator.

By Al P. Nelson
Feedstuffs Special Writer

When Wilmer Crouse, owner of Crouse Feed Mill, North Lima, Ohio, bought a bulk feed delivery truck two years ago, he did so because several poultry raisers in his area—especially broilermen—wanted to get their feed in bulk to take advantage of the price difference.

Today, Mr. Crouse operates two bulk trucks, one an auger and the other a pneumatic type. Both trucks are kept busy most of the time.

About 75% of his feed volume is in bulk feeds, and 80% of this business is poultry feeds. The firm is supplying feed for about 125,000 broilers and expects to increase this to 250,000 by signing a contract to furnish feed for a large integrator who has many farmers signed up.

"While we have only about 50 accounts that get bulk feed," states Leonard Basinger, mill foreman, "some of these accounts get feed several times a week and in large quantities. The way things are going, this volume is going to increase."

Discounts to farmers for taking feed in bulk range from $4 to $5 per ton, depending upon the brand bought. Mr. Crouse handles Master Mix and Quaker Oats feeds, including complete feeds for broilers and layers. He also handles Master Mix and Quaker concentrates. In addition, he makes his own line of Superior Feeds, using Master Mix concentrates.

Very important in this firm's custom mix program, Mr. Crouse said, is a series of 15 square storage bins inside the mill. Because they are square, the tanks utilize space well, and each holds 10 tons. A single, round, metal bin inside the mill holds six tons.

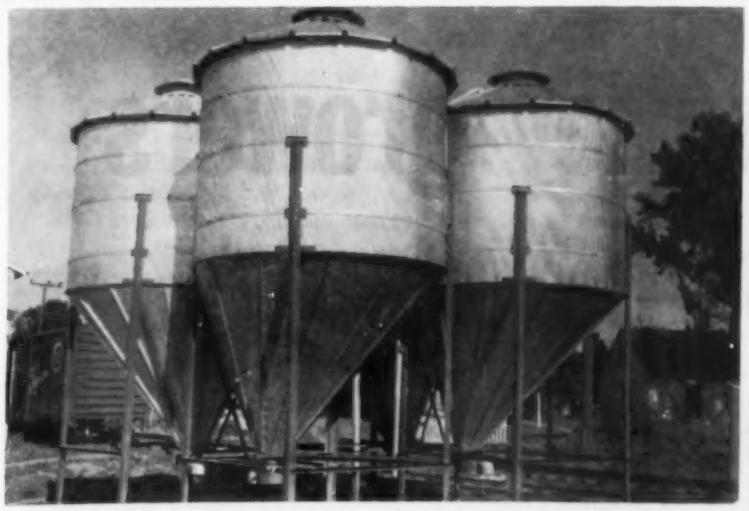
Outside the mill are four steel bins which hold 15 tons each. They are used to store complete feeds and also concentrates. Because the Crouse firm has such a large broiler and laying feed volume, a big tonnage is handled. The storage bins are necessary to keep completed feeds flowing regularly to poultry customers, some of whom get three sizable deliveries per week.

One storage bin holds turkey concentrates, another grower pellets, and one holds broiler concentrates which can be mixed with corn in varying amounts for starter or finishing feeds, says Mr. Crouse. Other bins hold complete feeds or ingredients.

All feeds come in by rail. The firm has an augered track where the feed can be dumped out of hopper cars.

If a customer wants Crouse's Superior Feed in bulk, it is made for him and put right into the bulk truck

(Turn to page 36)



OUTSIDE STORAGE—Four steel bins, each of 15-ton capacity, store feeds outside the Crouse Feed Mill at North Lima, Ohio. They are used for complete feeds and concentrates.

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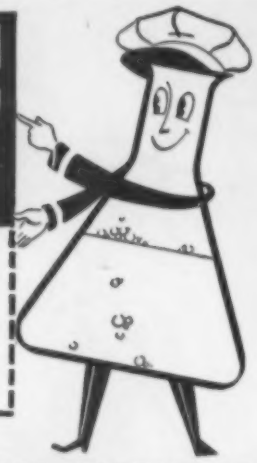

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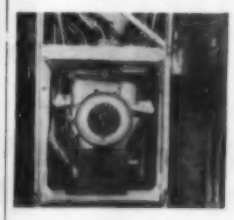

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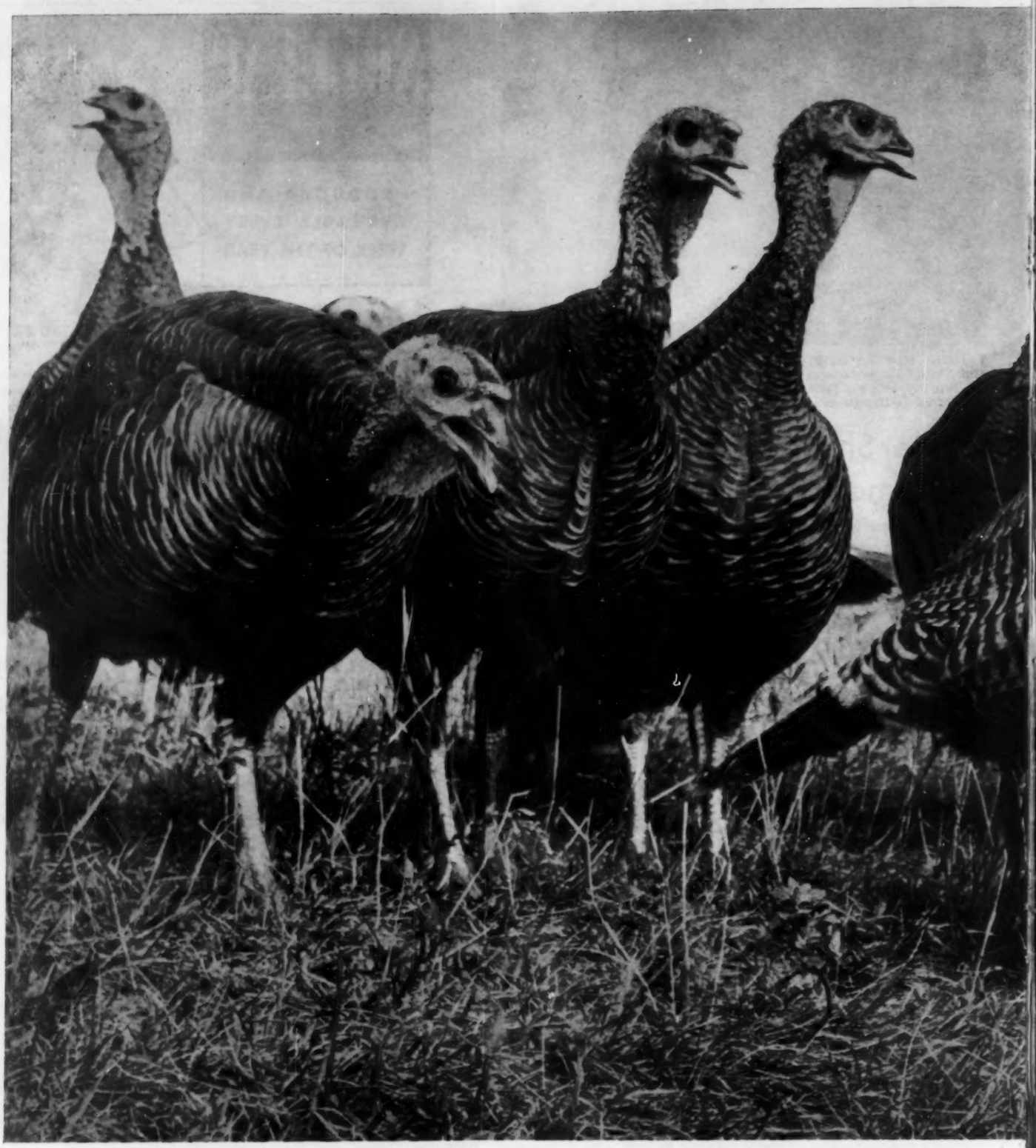

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ENHEPTIN-A provides maximum protection. It is not only the best defense in the *prevention* of blackhead—it is also the only drug that can be *depended on* to control outbreaks should they occur because of unusual conditions.

The continuous feeding of 0.015% Acetyl ENHEPTIN (2 lbs. of ENHEPTIN-A Premix 15% per ton of feed) is the recommended *preventive* level. This level is a practical one at the least cost.

The recommended level for *treating* outbreaks of blackhead is 0.05% Acetyl ENHEPTIN (6.6 lbs. ENHEPTIN-A Premix 15% per ton of feed).

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American Cyanamid Company, Agricultural Division, N. Y. 20, N. Y.

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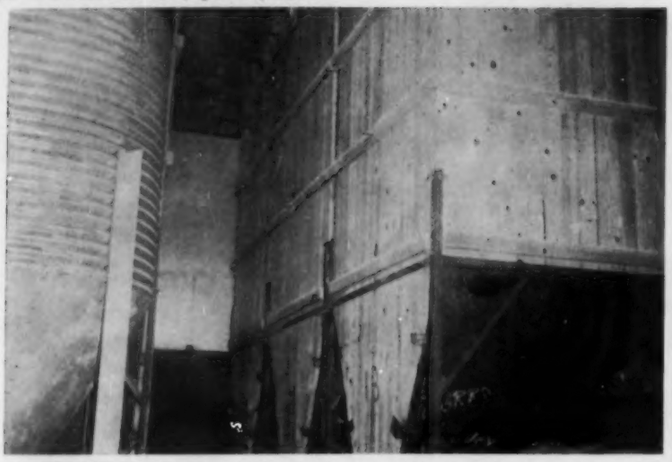

INSIDE STORAGE—Crouse Feed Mill, North Lima, Ohio, has a series of 15 square storage bins inside the mill. Each holds 10 tons. A six-ton, round metal bin is also located inside the building.

for delivery. Mr. Crouse does not make his own feeds for storage, but he does mix and store some Master Mix and Quaker Oats feeds.

With his large grain and feed storage, Mr. Crouse operates a grain bank plan to some extent. If the farmer wants grain ground and mixed, including concentrate, he pays 20¢ cwt. for this operation. If he wants grain picked up and brought to the mill for processing, there is an extra charge. The firm charges 15¢ bu. for shelling corn.

Farmers in the area raise corn, oats and wheat, and they use much local grain in their feeding programs. Mr. Crouse buys some grain to ship. One year he shipped 25 cars of wheat from the area. He uses a tractor and blower to get the grain into railroad cars.

Poultry customers have their own ideas on what kind of feed they should use for most profitable results, states Mr. Crouse, and his mill is set up to take care of all of them. For instance, one laying flock owner who has 5,000 hens buys all his concentrates from Crouse Feed Mill, and then he has his own grinder and mixer on the farm to process the feed. He is convinced this is the most profitable way for him to handle his feed program.

Another feeder buys three tons of broiler mash at one time, and has no grain to incorporate into the ration. Another grower gets several tons of feed per week in bags.

The need for bulk storage bins on farms shows the spread of bulk service. Some farmers do not like to make the investment. To help them get the needed bins the Crouse feed firm sells bulk feed to some customers at the bag price and deducts the difference until the bins are paid for.

"One thing which bulk feed service has enabled us to do is to extend our trade territory," says Mr. Crouse. "We can travel farther out in the territory with large loads, and this lessens the per-ton delivery cost. While we do most of our business rather close in, we do get some large bulk orders from as far as 30 miles."

The firm reports that it has had no difficulty thus far on breakdowns with its two large six-ton trucks, insofar as bad road conditions or soggy barnyards are concerned. The trucks are able to get through to poultry house or feeder locations. Mr. Crouse says many farmers are putting better surfaces on barnyards. The farmers know that such surfacing will help give them better and more regular service.

Very important to this dealer in his extended bulk delivery program is the help he receives from the Master Mix and the Quaker Oats salesmen. These men visit most of the Crouse Feed Mill customers in the area, and are able to help the feeders utilize the feeds they buy to the best advantage. Cooperation of this type, says Mr. Couse, enables the feed firm to add supplier supervision along with feed mill service to give the farmer a better deal. It's another contact which gives the farmer an extra opportunity to ask for advice to make certain he gets utmost value from the feed which he buys.

In addition to the bulk equipment, this mill also has a Fairfield Hughes hammer mill, a three-ton Kelly Duplex mixer, a two-ton Hughes mixer, a two-ton Prater mixer, an Allied weigh buggy, a Munson molasses mixer, a Zip corn sheller, a Clipper corn cracker, a Clipper cleaner and also a Fairbanks scale.

Eight employees are required to handle the business at this busy mill.

Integration

Concerning integration, Mr. Crouse feels that the independent feed mill can fit into some of these programs. For example, there are many farm cooperative and poultry marketing associations which want to start integration programs, but which have no feed processing plants, he said. Such organizations can contract with efficient, independent custom mills to furnish feed to integrated customers at competitive prices. This will be especially true where farmers who are integrated have grain they wish to work into their feeding programs.

READY TO GO—An employee sews a bag of the Crouse Feed Mill's brand, Superior Feeds. The branded feed is made with purchased concentrates.

"It seems to me that in the foreseeable future there will be independent farmers and also integrated farmers to some extent," says Mr. Crouse, "and they will all need feed. The alert custom mill operator, I think, can operate profitably serving both types of customers. We are doing it here, and expect to continue to do it."

In addition to some newspaper and direct mail advertising, Mr. Crouse is the financial backer of a Little League baseball team in the area. He says that the first year he did this, the cost was about $200 for uniforms and other equipment. After that, the cost of sponsorship has been about $100 per year.

The baseball team wears mill insignia on its uniforms, gets a great deal of newspaper publicity and other favorable mention. Mr. Crouse believes that good-will advertising like this balances a general newspaper and direct mail advertising program very well.

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Reports Comparison Of Corn Silage and Green Corn Pellets

FORT COLLINS, COLO.—Corn silage puts more efficient gains on feeder cattle than pelleted green corn, according to Dr. Dean Story, associate animal husbandman, Colorado Agricultural Experiment Station.

In a 112-day test at Colorado State University, Dr. Story found that steers self-fed on green corn pellets showed slightly higher daily gains than those full-fed on silage—2.29 lb. on pellets, compared with 2.12 lb. with silage.

But pellet-fed steers put away 20.6 lb. of pellets daily while silage-fed animals were eating 45 lb. of silage with an air-dry content of only 15 lb. Thus, on an air-dry basis, it took 1,070 lb. of pellets to produce 100 lb. of gain. This compared with only 891 lb. of silage, air-dry basis, for the same amount of gain, Dr. Story said.

When daily intake of green corn pellets was limited to 15 lb. per animal, both daily gains and feed efficiency were lower than for silage-fed steers getting 15 lb. of dry material in 45 lb. of silage. In this comparison, pellet-fed steers gained only 1.69 lb. a day and required 1,118 lb. of dry feed to produce 100 lb. of gain.

Influencing Factors

Dr. Story stated that differences in physical characteristics of the two feeds may have had some influence on feedlot performance of the cattle. "But it seems more likely that organic acids and other fermentation products in corn silage supplied additional, more available nutrients," he said.

He noted that silage-fed steers had a cleaner hair coat and showed more "bloom" than the pellet-fed cattle.

Despite the apparent superiority of silage, Dr. Story feels that in time pelleted green corn may provide cheaper, more efficient gains. "One major obstacle is the relatively high cost of pelleting," he said.

Dr. Story said putting corn in the silo is not the best way to conserve total nutrients. "Under the best of conditions there is a loss of from 5 to 15% in dry matter. In addition, handling silage requires more labor and storage space," he commented. "Considering these disadvantages, further study might well show that feeding pelleted green corn is cheaper despite less efficient gains, particularly when pelleting costs are brought down to a more economic level."

Dr. Story said there is the possibility of developing methods of supplementing the pelleted ration with compounds containing the organic acids and other fermentation products now found in silage.

The test also explored the possibility of feeding pelleted corn silage. However, daily gain for animals hand-fed these pellets at the rate of 15 lb. a day was only 1.34 lb. and 1,410 lb. of pellets were required to put on 100 lb. of gain.

"It was evident that corn silage pellets were inferior to either green corn pellets or corn silage as feed for cattle," Dr. Story said. "The difference in nutritional value of the silage and the silage pellets probably was due primarily to loss of volatile acids during the dehydration phase of the pelleting process."

All cattle under test also received equal amounts of other feeds, along with silage and pellets. Included in the daily per-animal ration were 2 lb. of alfalfa hay, 1.75 lb. of protein supplement, and traces of mineral and salt. The protein supplement included 5 mg. of stilbestrol per pound of supplement.

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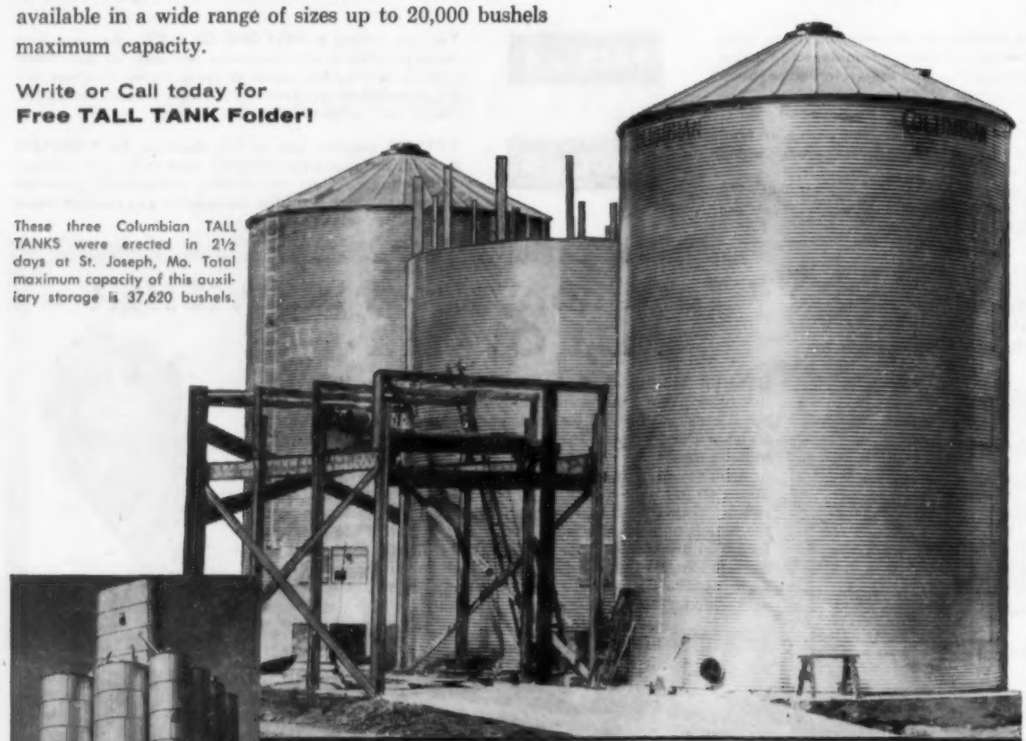

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GMI Board Proposes Common Stock Split

MINNEAPOLIS—The board of directors of General Mills, Inc., has initiated action to split the common stock of the company on a three-for-one basis.

The proposed change of the shares of common stock from no par value to a par value of $3 each and the proposed increase in the number of authorized shares of common stock from the present 3 million shares to 10 million shares will be submitted to the stockholders for their approval at the annual meeting Aug. 18. July 10 has been fixed as the record date for voting at the annual meeting.

If the proposals are approved by the stockholders, General Mills officials expect that additional shares resulting from the split will be distributed in September and that the first quarterly dividend on the split shares will be paid in November at the rate of 30¢ a share. This would be equivalent to an annual rate of $1.20 a share on the split shares or $3.60 a share on the present shares.

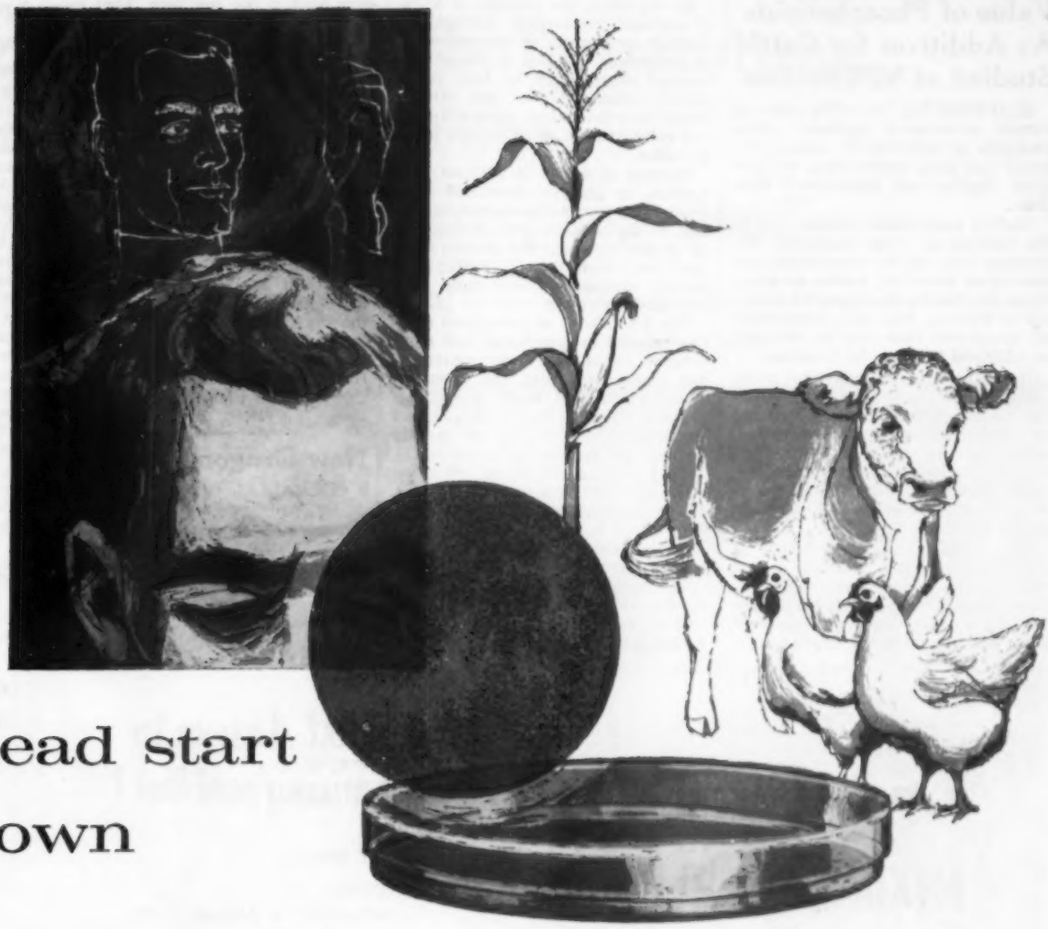
The company has no immediate plans for the issuance of the additional shares, if authorized.

Cargill Plans Storage Expansion at Chicago

CHICAGO—Addition this summer of 3 million bushels of storage space at the 17-million-bushel Cargill, Inc., terminal elevator here will make it the largest grain facility on the Great Lakes, Cargill has announced.

Clifford M. Roberts, Jr., regional manager, said anticipated major exports of Illinois and Indiana grain from Chicago through the St. Lawrence Seaway, plus stepped-up barge and rail movement to the South and Southeast, make the expansion necessary.

Additions at Chicago will comprise three 1-million-bushel tanks, each 160 ft. in diameter, 91 ft. high at the center and 48 ft. high at the rim. Each tank will be connected to the main elevator by an overhead conveyor for filling and an underground conveyor to carry outgoing grain.



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Value of Phospholipids As Additives for Cattle Studied at VPI Station

BLACKSBURG, VA.—The value of certain carbonated vegetable phospholipids as additives to rations for cattle has been under study at Virginia Agricultural Experiment Station.

Station researchers explain that in the refining of crude vegetable oils, residual fats, fatlike compounds and associated materials known as soapstock are produced. Improved methods of refining, they said, have yielded soapstocks that may be valuable as additives to feeds for livestock.

In addition to the nutritive value the soapstocks may have, their physical consistency makes them desirable in reducing dustiness in rations containing ground feeds. The scientists wanted to determine the nutritive value, they said, as well as to identify any toxic properties the materials might have.

The Virginia trials, conducted at Virginia Polytechnic Institute and at the beef cattle research station at Front Royal, Va., involved feeding beef steers and digestion tests with dairy heifers and in the laboratory.

In the trials, the addition of 1½% of soybean, cottonseed, gossypol-detoxified cottonseed, or de-ammoniated cottonseed, or .75% to 3% of cottonseed phospholipid to beef cattle drylot rations had no bad effects. There were indications these additives had value at least equal to their energy value.

Feeding of 0.3 lb. of soybean, cottonseed, or gossypol-detoxified additive to yearling steers on pasture also had no bad effects. The averages of all groups receiving the various additives were about 6 to 7% better than control animals in both daily gain and feed efficiency.

The 1½% level of cottonseed additive seemed to give faster and more efficient gains than other materials, and levels used with the exception of the 3¼% level, which was slightly more efficient. They had no effect on dressing percentage or carcass quality, the researchers reported.

They had no significant effect on plasma levels of fat-soluble vitamins, except possibly to increase vitamin E. This effect is thought to be because of their tocopherol content, according to the scientists.

The additives had no conspicuously good or bad effects on cellulose digestion, fatty acid production, or nitrogen metabolism when added to rumen fluid in the test tube. They significantly decreased surface tension of rumen fluid when added in the test tube, and scientists think this ability may have some value in bloat prevention.

A complete report of the test is available in Technical Bulletin 139, the Agricultural Experiment Station, Virginia Polytechnic Institute, Blacksburg.

Heads Department

STORRS, CONN.—Dr. Charles F. Helmboldt has been named head of the department of animal diseases in the University of Connecticut College of Agriculture to succeed Dr. Erwin L. Jungherr, who retires June 30. Dr. Helmboldt has been a member of the University of Connecticut staff since 1946.

New Oregon Bulletin

CORVALLIS, ORE.—New findings in beef cattle feeding, including adjustment of rations for animals receiving hormone treatment, have been reported by the Oregon State College Agricultural Experiment Station here in a bulletin, "Results of 1957-58 Milton-Freewater Beef Feeding Experiments."

Spanish Feed Firm Seeks U.S. Capital

WASHINGTON — A Spanish firm manufacturing feeds and dehydrated alfalfa is seeking U.S. financial collaboration, the U.S. Department of Commerce reports. The firm, Compania Organizadora del Consumo, S.A., COCSA, is looking for approximately $500,000 for the proposed project.

Established in 1950, the firm reportedly maintains plants at Ciempozuelos, Raymat, Guadiana del Caudillo, and is currently establishing an additional plant at Jabalquinto. Total annual production capacity of mixed feeds is estimated at 66,000 metric tons, and the production of dehydrated alfalfa is set at 2,840 metric tons.

Present demand for both mixed feeds and dehydrated alfalfa, according to COCSA, far exceeds production. Expanded operations will include exports of mixed feeds and possibly alfalfa.

The potential investor is offered management participation in the enterprise.

Interested firms are invited to correspond with the firm at Rics Rosa 54, Madrid, Spain.

Indiana Poultry Firm Boosts Chick Capacity

LA GRANGE, IND.—To supply the demand of a reported 60% sales increase in chicks, Lambright Hatchery & Poultry Farm, Inc., La Grange, has boosted its hatching capacity by 20% with the installation of new incubator units during the past six months.

James Lambright announced that a new breeding and research test farm was recently put into full operation at Fawn River Farm, Howe.

Lambright spokesmen said the firm is now selling its White Meateor broiler chicks in six states—New Jersey, Iowa, Illinois, Michigan, Indiana and Ohio.

Marks 25th Year

MINNEAPOLIS—Morrie Peterson, in traffic and sales for the A. L. Stanchfield Co. here for the past 25 years, was recognized by the firm recently for his quarter-century of service.

A. L. Stanchfield, president of the wholesale grain and feed firm, entertained Mr. and Mrs. Peterson at his home and presented Mrs. Peterson with an orchid and Mr. Peterson with an inscribed diamond ring in honor of the occasion.

Mr. Peterson, who reached the 25th anniversary March 15, is the third employee of the firm to pass the quarter-century mark in service. The other two are Ed Kumpula, vice president, and R. A. Stanchfield, secretary.

THE Marion MIXING and BLENDING ACTION

AN EXCLUSIVE DESIGN!

the Best Answer to any mixing problem!

MIXING:
- DRY FEEDS

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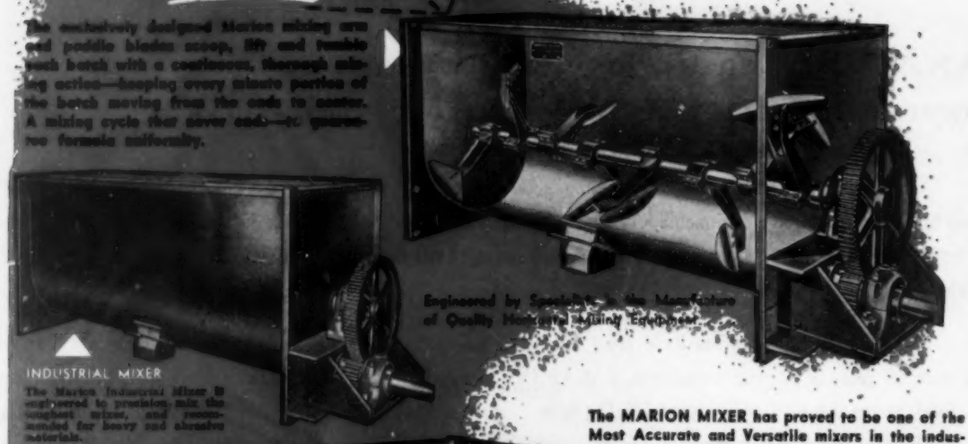
- MOLASSES
- ANIMAL FATS
- FISH SOLUBLES
- OTHER LIQUID ADDITIVES

You need only one mixer in your plant or mill to satisfy all your mixing and blending requirements, the MARION MIXER. The Marion Mixer handles the mixing of dry feeds, and blending of molasses, fish solubles, animal fats and other liquid additives with the same ease and dependability.

The exclusively designed Marion mixing arm and paddle blades scoop, lift and tumble each batch with a continuous, thorough mixing action—keeping every minute portion of the batch moving from the ends to center. A mixing cycle that never ends—to guarantee formula uniformity.



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A rugged, dependable mixer that will provide absolute mix uniformity for years to come.

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Designed for low cost mix feed with rapid, high precision mixing action. Ideal for portable installations.

The MARION MIXER has proved to be one of the Most Accurate and Versatile mixers in the industry. The exclusive Marion mixing and blending action is the key to its accuracy because of its continuous cross-blending and other mixing action which insures that even the smallest amounts of materials can be thoroughly and completely blended into your product. A constant uniform mix is guaranteed batch after batch, bag after bag.

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I am interested in the MARION MIXERS checked below:

☐ MOLASSES MIXER; CAPACITY ☐ 1000# ☐ 2000# ☐ 3000# ☐ 4000#

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"Modern manufacturing, bulk handling and top production feeds are helping Ful-O-Pep Dealers progress,"

says **H. W. CRUTCHFIELD,** *Manager of Sherman Feed Division of The Quaker Oats Company, in this report to Ful-O-Pep Dealers*

H. W. CRUTCHFIELD joined The Quaker Oats Company in 1940. After World War II, he served as a District Representative until 1955, when he was promoted to Manager of Ful-O-Pep's Sherman (Southwestern) Feed Division. Mr. Crutchfield is a director of the Texas Feed Manufacturers Association.

"Part of Ful-O-Pep's success in the Southwest is due to the high quality and dependability of our product. Research has contributed top production formulas for Ful-O-Pep. Quaker's modern manufacturing methods are assuring complete mixing and fast distribution at low costs.

"For example, at the Sherman feed mill, we have efficient feed blending equipment to assure accurate mixing of the many ingredients that make up quality Ful-O-Pep Feeds. New equipment for bulk handling of feed by cars, as well as trucks, is speeding up service to our dealers and reducing handling costs.

"A large percentage of all feed shipped from our mill is bulk. In addition, Quaker is helping dealers and feeders set up their own bulk feed facilities, so they, too, can benefit from this progressive development.

"New feeding and management programs are now available for the producers of broilers, beef cattle, hogs, turkeys and layers. Our District Representatives are helping dealers promote these planned programs.

"It is the aim of The Quaker Oats Company to help the dealer and the feeder both make money. We welcome inquiries from distributors who are interested in learning more about the Ful-O-Pep Feeds franchise."

H. W. Crutchfield

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made by The Quaker Oats Company

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Convention Calendar

June 7-9—Indiana Grain & Feed Dealers Association; Sheraton Hotel, French Lick, Ind.; sec., Fred Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

June 7-9—Eastern Federation of Feed Merchants, Pocono Manor Inn, Pocono Manor, Pa.; sec., Austin W. Carpenter, Sherburne, N.Y.

June 8-10—Alabama Poultry Industry Assn.; Municipal Auditorium, Birmingham; exec. sec., W. L. Walsh, P.O. Box 567, Montgomery, Ala.

June 8-12—Feed Microscopy Short Course; Missouri College of Agriculture, Columbia, Mo.; sponsored by Missouri College of Agriculture and Missouri State Department of Agriculture; chm., G. M. Barnhart, chief chemist, State Department of Agriculture, Jefferson City, Mo.

June 9—Northeastern Poultry Producers Council Egg Quality and Grading School; University of Massachusetts, Amherst; mgr. Dr. Alfred Van Wagenen, 19 Rutgers Place, Trenton 8, N.J.

June 9-10—Association of Southern Feed and Fertilizer Control Officials; Velda Rose Motel, Hot Springs, Ark.; sec., Maurice B. Rowe, Virginia Dept. of Agriculture, 1123 State Office Bldg., Richmond, Va.

June 17-18—Midwest Bulk Feed Fair; Minnesota State Fairgrounds, St. Paul; chm., R. S. Noller, Butler Mfg. Co., 900 6th Ave. S.E., Minneapolis 14.

June 25-27—Canadian Feed Manufacturers Assn.; Bigwin Inn, Lake of Bays, Ontario; N. D. Hogg, Box 66, Station Q, Toronto, Ont.

June 25-27 — Delmarva Chicken Festival; Dover, Delaware; sec., J. Frank Gordy, Delmarva Poultry Industry, Inc., R.F.D. No. 2, Box 47, Georgetown, Del.

July 7-8—Poultrymen's Get-Together, Cornell University, Ithaca, N.Y.

July 10-14—Georgia Feed Assn.; General Oglethorpe Hotel, Savannah, Ga.; sec., Will L. Kinard, 3240 Peachtree Rd. Bldg., Atlanta 5, Ga.

July 17-18—New Mexico Grain & Feed Dealers Assn.; Castaneda Hotel, Las Vegas, N.M.; sec., Parley Jensen, P.O. Box 616, Albuquerque, N.M.

July 21-23—American Poultry Congress and Exposition; Kiel Auditorium, St. Louis, Mo.; exec. sec., Don M. Turnbull, American Poultry and Hatchery Federation, 521 E. 63rd St., Kansas City 10, Mo.

Aug. 3-8—Feed Microscopy Short Course; Texas Agricultural Experiment Station, College Station; chm., E. E. Brown, Asst. State Chemist.

Aug. 4-5—Midsouth Soybean and Grain Shippers Assn.; Hotel Peabody, Memphis, Tenn.; sec., Paul C. Hughes, P.O. Box 692, Blytheville, Ark.

Aug. 4-7—Poultry Science Assn. (meeting for members and executive committee invited guests only), Iowa State College, Ames; chm., Dr. Robert E. Phillips, poultry department, Iowa State College.

Aug. 7-8 — North Carolina Feed Manufacturers Assn.; Ocean Forest Hotel, Myrtle Beach, S.C.; sec.-treas., A. M. Upshaw, Jr., North Carolina Feed Manufacturers Assn., Box 44, Mocksville, N.C.

Aug. 10-12 — American Soybean Assn. and National Soybean Processors Assn., joint convention; Sheraton-Jefferson Hotel, St. Louis, Mo.; exec. vice president, George M. Strayer, American Soybean Assn., Hudson, Iowa; sec., National Soybean Processors Assn., R. G. Houghtlin, 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 11-12—Wisconsin Nutrition School; Memorial Union, University of Wisconsin, Madison; chm., Dr. Robert H. Grummer, Dept. of Animal Husbandry, University of Wisconsin.

Aug. 17-18—Kentucky Feed Conference, sponsored by University of Kentucky and Kentucky Feed & Grain Assn.; Brown Suburban Hotel, Louisville; sec., Jack Weber, P. O. Box 425, Lexington, Ky.

Aug. 23-25—Poultry Industries of Louisiana, Inc.; Captain Shreve and Washington Youree Hotels, Shreveport; sec., Clyde Ingram, Louisiana State University, Baton Rouge, La.

Aug. 23-25 — The National Hay Assn.; Sir Francis Drake Hotel, San Francisco; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

Aug. 24-27—Georgia Poultry Insti-

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the columns in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

● ● ●

Sept. 9-17 — Illinois State Turkey Growers Assn., farm of Clarence Ziemer, Elmwood, Ill.; sec., S. B. Swann, Kauffman Turkey Farms, Waterman, Ill.

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tute; Rock Eagle 4-H Club Center; Eatonton, Ga.; chm., Arthur Gannon, Poultry Division, University of Georgia, College of Agriculture, Athens, Ga.

Sept. 4 — Illinois Cattle Feeders Day, University of Illinois, Urbana; chm., A. L. Neumann, Beef Cattle Division.

Sept. 9-10 — Pet Food Institute, Drake Hotel, Chicago; sec., Clyde Kassens, 332 S. Michigan Ave., Chicago, Ill.

Sept. 9-10 — Maryland Poultry Service Conference; University of Maryland, College Park; chm., Wade H. Rice, University of Maryland, College Park, Md.

Sept. 13-14—Grain and Feed Dealers National Assn. (work meeting for directors, committees and members), Minneapolis; exec. vice pres., Alvin E. Oliver, 400 Folger Bldg., Washington 5, D.C.

Sept. 15-16—Mutual Millers & Feed Dealers Assn.; Jamestown, N.Y.; sec., Margaret Bentley, 41 Chautauqua Ave., Jamestown, N.Y.

Sept. 16-18—National Feed Ingredients Assn.; Pick-Congress Hotel, Chicago, Ill.; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Sept. 17-18 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; chm., Dr. E. L. Stephenson, Department of Animal Industry.

Sept. 18 — College-Feed Industry Conference; Iowa State College, Ames; chm., Prof. Emmit Haynes, Animal Husbandry Dept.

Sept. 23 — Vermont Feed Dealers and Manufacturers Assn.; University of Vermont, Burlington, Vt.; sec., D. C. Henderson, Hills Agricultural Science Building, Burlington, Vt.

Sept. 23-25 — Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 26—Small Mill Short Course; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Oct. 6-8 — Northeastern Poultry Producers Council Exposition and Convention; Farm Show Building, Harrisburg, Pa.; chm., Alfred Van Wagenen, 10 Rutgers Place, Trenton 8, N.J.

Oct. 7-9—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Department of Poultry Science.

Oct. 11-14—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Cumberland Falls State Park, Corbin; sec., John W. Tuttle, 730 Rose St., Lexington, Ky.

Oct. 14 — Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Irwin Olcott, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32, Ill.

Oct. 14-15—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Agricultural Experiment Station Bldg., University of Kentucky, Lexington, Ky.

Oct. 15-16—Michigan Feed & Grain Dealers Assn.; Kellogg Center, Michigan State University, East Lansing, Mich.; sec., Nevels Pearson, P.O. Box 472, East Lansing, Mich.

Oct. 15-16 — West Virginia Feed Dealers Assn. convention; Blackwater Falls Lodge, Davis; sec., J. S. Larrick, Beckley Ice & Feed, Beckley, W. Va.

Oct. 19-20—California Animal Industry Conference; Fresno, Cal.; sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; chm., Berton Maxwell, Poultry Producers of Central California, Petaluma.

Oct. 20-21—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Oct. 22-23 — Annual Stockholders Meeting, Cooperative G.L.F. Exchange, Inc., Onondago County War Memorial Building, Syracuse, N.Y.

Oct. 30 — Illinois Sheep Producers Day; University of Illinois, Urbana; chm., Dr. U. S. Garrigus, Department of Animal Science.

Nov. 4-7 — National Renderers Assn., Hollywood Beach Hotel, Hollywood Beach, Fla.; sec., Miss Jamie Fox, 30 N. La Salle St., Chicago 2, Illinois.

Nov. 6-7—Oklahoma Formula Feed Conference; Oklahoma State University, Stillwater; chm., Dr. Rollin H. Thayer, Poultry Science Department.

Nov. 12-13—Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Dr. F. W. Hill, Poultry Husbandry Dept., Cornell University, Ithaca, N.Y.

Nov. 17-18—Arizona Grain & Seed

CALENDAR FOR 1959-60

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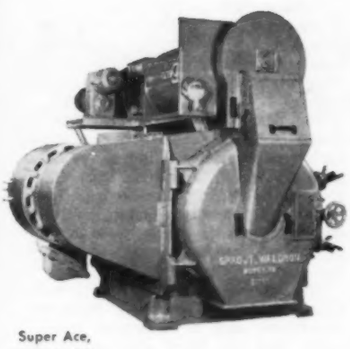
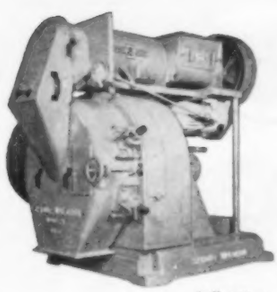
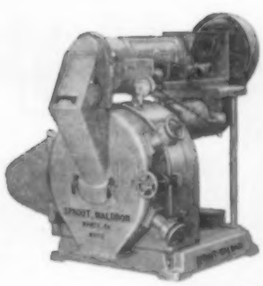


Super Ace, Bulletin 201



Pellet Ace, Bulletin 100-A

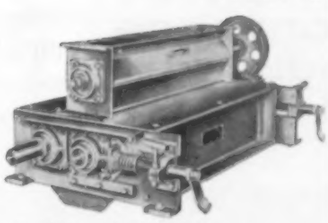


Junior Ace, Bulletin 165-A

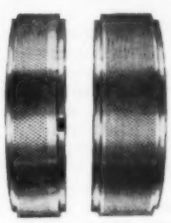
Sprout-Waldron leadership in pellet mill design goes beyond the development of the vertical ring die, the concept of driven dies, the use of V-belts as opposed to complicated gear trains, the swing-head die casing, the Kuftex® rolls and the other "firsts" attributed to our creative engineering. It begins before the mill itself with advanced stainless steel feeder-conditioner design and the scientific introduction of steam at high temperatures . . and extends beyond the mill to the concept of air handling of pellets and the creation of integrated coolers, crumblizers, graders and shakers to match the capacity of the mill.

In test after test, Sprout-Waldron pellet mills have out-produced in tons per horsepower, every competitive mill on the market. Whether your needs be for the Junior, the Ace® or the Super Ace®, the use of a Sprout-Waldron mill is your guarantee of uniform high quality, maximum production rates and minimum operating costs.

For the cooling of pellets, the Sprout-Waldron Coolaire® with its patented hinged louvers for automatic flow control is outstanding . . either as an individual unit or as part of a compact cooler, dryer, crumblizer, cleaner and grader assembly. For use with the Junior Pellet Ace, the Sprout-Waldron Rotaircool® provides an efficient cooler with a built-in pneumatic conveying system. It too, is available as a unit machine or in a compact system with crumblizer and shaking shoe. All of these pelleting accessories have been designed to help achieve highest production with greatest economy from the very best in pellet mill design. Bulletins on request.



Crumblizer with roll feeder, Bulletin 4-A



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Pellet and crumbles cleaning shoe, Bulletin 120

Coolaire, Bulletin 105

Rotaircool, Bulletin 177-A

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Association; Hotel Westward Ho, Phoenix; sec., Hayden C. Hayden, Hayden Flour Mills, Box 156, Temple, Ariz.

Nov. 19-20—National Swine Industry Conference; Iowa State College, Ames; chm., Keith Myers, National Swine Growers Council, Grundy Center, Iowa.

Nov. 30-Dec. 1—Midwest Veterinary Nutrition Conference; President Hotel, Kansas City; sec., Lloyd Larson, Midwest Feed Manufacturers Assn., 20 W. 9th Street Bldg., Kansas City 5, Mo.

Dec. 8-9 — Poultrymen's Service Clinic; Cornell University, Ithaca, N.Y.

1960

Jan. 4-5—Kansas Formula Feed Conference; Kansas State University, Manhattan, Kansas.

Jan. 25-27—Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 4-5—Oregon Animal Industry Conference; Oregon State College, Corvallis, Ore.; chm., Dr. J. E. Parker, Poultry Husbandry Department.

Feb. 8-9—Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry Dept.

Feb. 11—Boston Grain and Flour Exchange Annual Banquet; Sheraton-Plaza Hotel, Boston; chm., Paul Sutliff, 177 Milk St., Boston, Mass.

Feb. 12-14—Fact Finding Conference, sponsored by the Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 59 East Madison, Chicago, Ill.

Feb. 21-23—Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., G. E. O'Brien, 694 N. Ohio Street, Greenville, Ohio.

Feb. 22-23—Virginia Feed & Nutrition Conference; Hotel Roanoke, Roanoke; J. Paul Williams, sec., Virginia State Feed Assn., 615 E. Franklin St., Richmond, Va., or Prof. Paul M. Reaves, Department of Dairy Science, Virginia Polytechnic Institute, Blacksburg, Va.

March 7-8—Grain & Feed Dealers National Assn.; Hotel Muehlebach, Kansas City; sec., Herbert L. Sharp, 400 Folger Bldg., Washington 5, D.C.

March 23—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati; sponsored by Distillers Feed Research Council; exec. director, Dr. Lawrence E. Carpenter, 1232 Enquirer Bldg., Cincinnati, Ohio.

May 9-11—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

CHARTER GRANTED

TOPEKA, KANSAS—Abilene (Kansas) Grain Co., Inc., has been granted a charter by the secretary of state's office. A grain storage and merchandising business, the firm has an authorized capitalization of $50,000. James G. Winn has been named resident agent.

Economist Suggests Federated Marketing Of South Dakota Eggs

BROOKINGS, S.D. — Federated marketing and the integration of production and marketing have been examined recently by a South Dakota State College economist seeking answers to the state's egg marketing problems.

The economist, Dr. Travis W. Manning, suggested in a recent issue of South Dakota Farm and Home Research that both might be of benefit.

Managers of most egg marketing cooperatives in the state have become concerned about markets for eggs, he said. Traditional markets for the state's eggs have become less attractive, and he pointed out that a recent survey of 28 cooperatives in the state showed that 21 of their managers favored organizing a federation of egg marketing cooperatives.

Experiences of federations in other states point up four advantages for the system, he said. (1) It eliminates unnecessary and inefficient handling. (2) The increased volume is conducive to a more favorable marketing position. (3) It would stimulate competition with local wholesalers and assembly plants toward more efficient pricing policies. (4) It would enable a shift in sales responsibility from the already busy cooperative manager.

Calling such a federation a step in integration, he said a step further would be integration of production and marketing. Spelling out an integrated production-marketing program, he listed three major steps.

The first is a contract between a group of large scale producers with their cooperative. Required of the producer would be specified practices regarding housing, flock care, feeding and egg handling. The cooperative would furnish the chicks, feed, equipment and supplies and would buy the eggs at a premium.

The second step would be a contract between a group of local cooperatives and a federated association, and the third step would be a contract between the federation and one or more egg jobbers or retail buyers.

Dr. Manning listed eight advantages for an integrated production-marketing system, as follows: (1) More efficient producers; (2) consistently high egg quality; (3) lowered marketing costs; (4) more efficiency in the marketing channel; (5) better markets; (6) more stability resulting from contracts; (7) assurance of a full return for producers; (8) South Dakota's out-of-state market may be preserved.

California Egg Laying Test Results Reported

MODESTO, CAL.—Results of the 10th California Official Random Sample Egg Laying Test indicate that cage birds tend to lay fewer and larger eggs, and floor birds produce fewer eggs with blood and meat spots.

Data showed that production among floor birds in the 10th test for the 44-55 weeks' period was 83.8%, compared to 65.5% during the same period last year. Among the cage birds, however, production was only 64.3%, down from the 67.9% level of a year ago.

Along with the increased rate of lay of the floor birds, feed conversion improved from 4.8 to 4.5 lb. per dozen eggs.

for market hogs: from farrowing through finishing...
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Borden's krepro and hopro

give top feed performance at reduced cost

With KREPRO and HOPRO you can build your own swine feed tonnage with a "life-cycle" program that meets the changing nutritional needs of growing swine—at unusually low cost.

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For pigs up to 50 lbs., KREPRO supplies all fish, whey, and fermentation factors,* vitamins, antibiotics, and trace minerals — in amounts needed for fast starting and maximum feed efficiency. Yet KREPRO may actually save you money — it contains saccharine and thus can save up to $20. per ton on sweetener costs.

for pigs over 50 lbs.... hopro

Economically formulated, HOPRO provides all needed micronutrients, growth and fermentation factors* — for more and better lean-meat-type-hog production and reproduction. Available in three forms so that you can rotate antimicrobials for development of natural immunities and avoidance of drug resistance: HOPRO AB (contains penicillin and bacitracin); HOPRO 3N (contains 3-nitro-4-hydroxyphenylarsonic acid); and HOPRO R (no antimicrobial guarantee).

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Versatile auger unit attaches to any grain body. Exclusive unloading AND loading anywhere anytime. Unloads as fast as loading. Handles bulk feed, grain and other materials. Pellets handled with minimum breakage. Smooth hydraulic operation.

PAMCO SKOOP SKIPPER Too!

All the features of the Back Saver, plus . . . exclusive tank stabilization. Standard 2, 3, or 4 compartment units. Full capacity dimensions. Pamco Positive Seal assures against leakage of feed or other materials. Dispersing auger for loading leads into each compartment. Double gate per compartment standard for each unit.

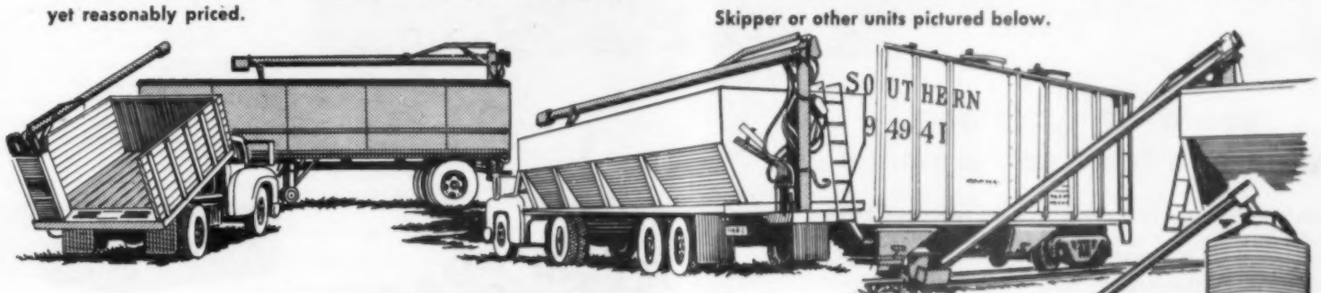
Both with a Boarding House R-E-A-C-H

You can not afford lugging feed or other materials by hand. PAMCO makes handling sacks as obsolete as the scoop shovel. Shrinks your overhead costs while sparking new business. Takes the backache out of your customer service.

PAMCO precision engineered. Combines quality with simplicity, yet reasonably priced.

PAMCO handles many bulk materials — ground corn cobs, screened wood shavings, stoker coal, sawdust, fertilizer, expanded clay aggregate, screened bulk limestone, bulk cement.

Write today for full information on the PAMCO Back Saver, Skoop Skipper or other units pictured below.



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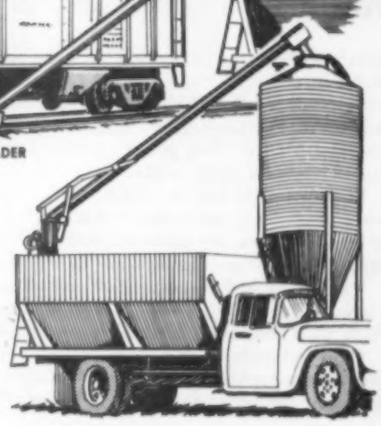


SKOOP SKIPPER

Added Fat, Protein Studied in Poultry Tests at Wisconsin

MADISON, WIS. — Added fat in pullet rations can reduce costs, but the protein content must be increased, too, according to recent research at the University of Wisconsin.

Dr. D. E. Turk, Dr. H. L. Bird and Dr. M. L. Sunde experimented with different protein-energy ratios in feeds for pullets last year. This was a follow-up of research which showed that protein levels could be reduced without injuring egg-laying performance later in life.

Added fat in feeds gives more energy and more efficient gains for broilers, they found. The researchers were interested in learning how added energy would affect the cost and efficiency of the ration for replacement pullets. This cost could be compared with the costs of raising the pullets on low-protein, low energy rations to find which was the best.

Higher energy levels were most efficient and least costly, the research showed. But the poultry specialists warned that changing prices might change this situation. All birds on high-energy diets ate feathers, but raising the protein level reduced feather eating some. Pullets fed low energy diets did not eat feathers.

A ration with about 1,000 calories of productive energy seems to be the best bet at present prices. They said this could be made by using a corn, soybean oil meal diet.

Protein content should be around 17% from the time the birds are 8 weeks old until they're 15 weeks old. Then it can be cut to around 14% until the pullets go into the laying house.

With the lower energy rations (800-900 calories) protein content should be set at 15% at six weeks of age, cut to 12-13% at 10 weeks and reduced still further to 11-12% at 15 weeks, according to the Wisconsin researchers.

Quality Egg Program Widens Cooperative's Integrated Activities

ARCADIA, WIS.—Arcadia's A. G. Cooperative has expanded its growing program of integration another notch during the past few months.

Latest addition is a quality egg program designed "to take advantage of high premiums for quality eggs at all times of the year, and particularly during the months of September, October and November."

During 1959, the cooperative is furnishing each of its egg producers with about 1,500 pullets a month to assure continuous production of large eggs. The association has already developed a market outlet.

Expansion into egg production followed expanding broiler production, which began in 1951, and the installation of two new feed mills, one in 1955, and another in 1958.

Development of the integrated program was the subject of an article in the May issue of News for Farmer Cooperatives, a publication of the Farmer Cooperative Service of the U.S. Department of Agriculture. Authors were H. H. Bakken and G. S. Grewal of the University of Wisconsin.

Under the broiler contract, growers agreed to finish four batches of birds annually, each in 10 to 12 weeks. They agreed to purchase chicks from the A. G. Cooperative hatchery and to use one brand of feed purchased from the cooperative. They also agreed to process and market their birds through the cooperative.

A goal of 5,000 birds weekly at the start grew steadily to 60,000 in 1957. To keep the broiler operation running at full schedule today 108 farmers keep laying flocks of about 65,000 breeders to supply the hatchery.

GEORGIA TOP HATCHERY STATE IN NATION

ATLANTA, GA. — Georgia has come from 11th to first place in commercial hatchery operations since World War II, the U.S. Department of Commerce says, and the Southeast in general is headed for another booming year. Commercial hatcheries in the seven-state area produced approximately 230,408,000 chickens in the first quarter of 1959. This was an increase of 46,624,000 over the same period last year. Of this total, Georgia produced 92,011,000.

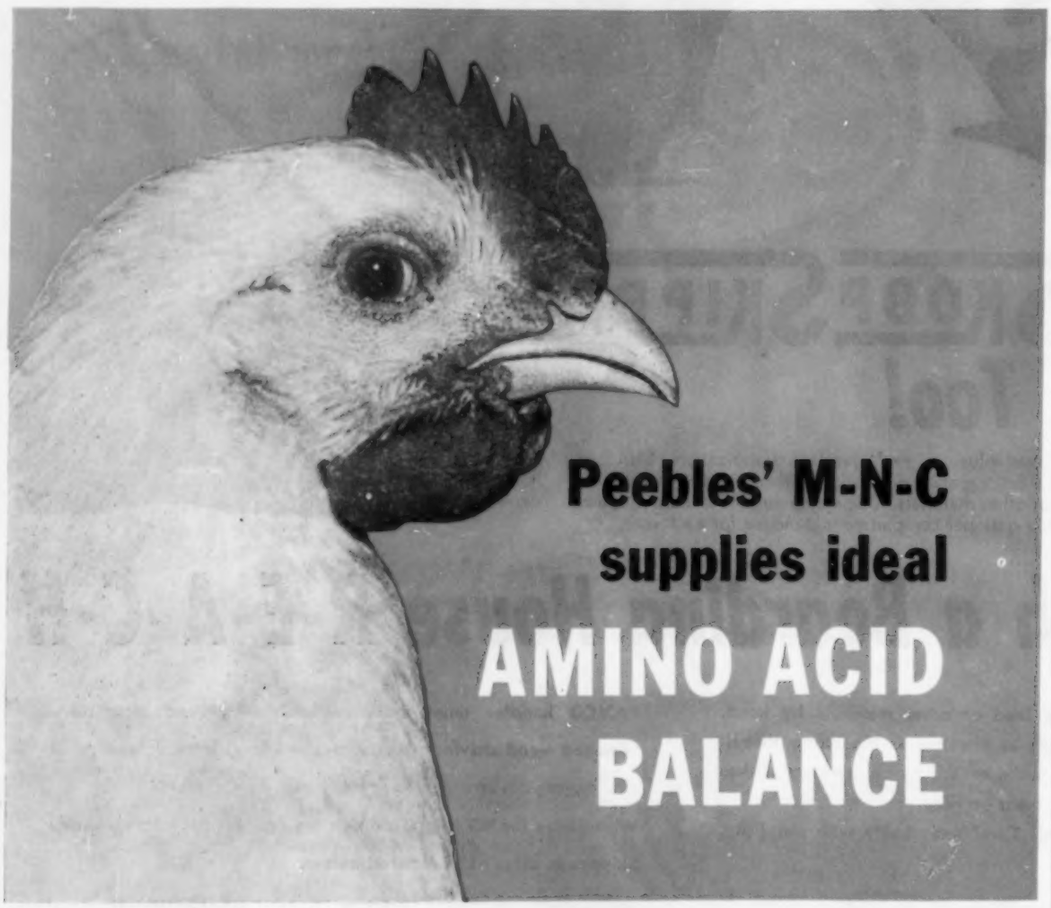
Baughman Distributor For Mississippi Named

JERSEYVILLE, ILL. — Baughman Manufacturing Co., Inc., Jerseyville, has announced the appointment of Myrick Equipment Co., Mt. Pulaski, Ill., as its exclusive distributor for Baughman bulk feed bodies in the state of Mississippi.

The announcement said B. N. Myrick will represent the new distributorship, traveling throughout Mississippi. At a later date, he will establish a permanent office centrally-located in the state. Myrick Equipment Co. now serves as Baughman distributor in five states, handling bulk feed bodies in Arkansas, Louisiana and Mississippi on an exclusive basis, and bulk feed bodies and bulk transport bodies on a non-exclusive basis in Illinois and Missouri.

Ohio Roundup Planned

COLUMBUS, OHIO — Ohio cattle feeders will hold their annual Summer Roundup and Barbecue Aug. 8 at the Fayette County fairgrounds in Washington Court House, J. H. Warner, Ohio State University extension livestock specialist and secretary of the Ohio Cattle Feeders Assn., reports.



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Peebles' exclusive spray-dried process assures uniform high quality. M-N-C's smooth, even texture provides uniform color and even distribution in mixed feeds.

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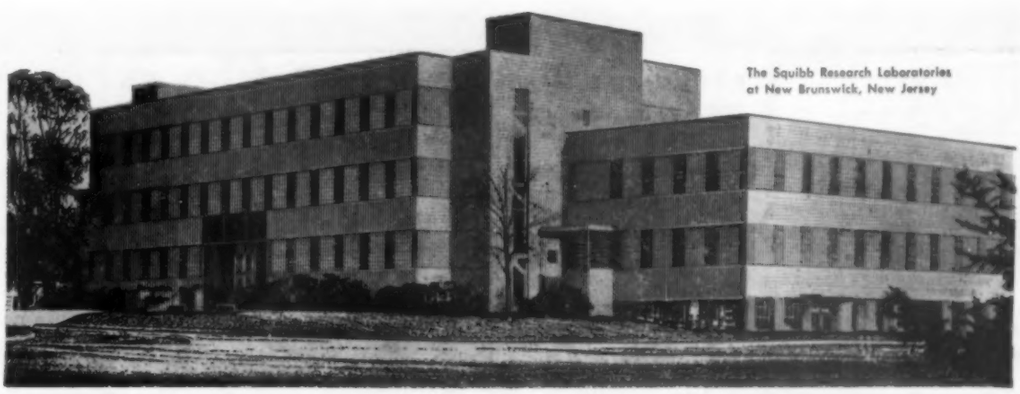

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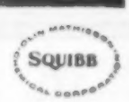

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General Sales Manager

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SALES ASSISTANCE from well trained, enthusiastic district managers produces new business and keeps Honegger dealers inspired. Product specialists, such as building and equipment salesmen, help dealers close big sales.

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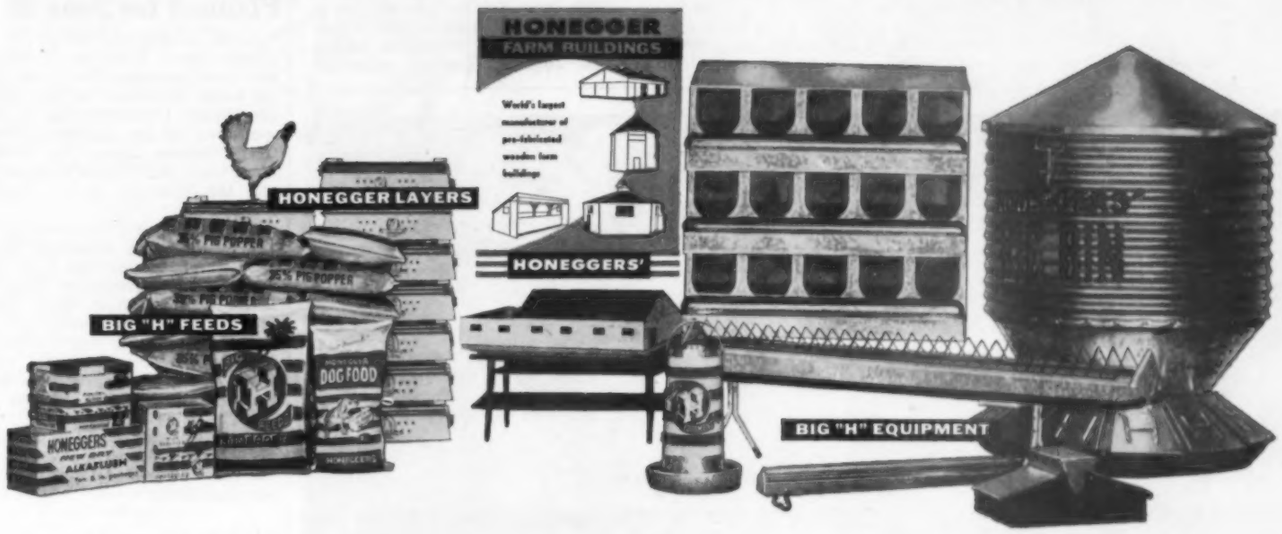

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PATRONAGE DIVIDEND gifts make real boosters of farm wives and kids. Coupon-saving customers get valuable premiums direct from Honeggers without bother or expense on dealer's part. Result: terrific customer loyalty . . . REPEAT PROFITS!

BULK FEED SERVICE at Honeggers' employs king-sized fleet of hopper cars and modern bulk trucks. Honeggers' bulk farm bins are profit-makers that help dealers sew up business.

Hormone Implant Ups Beef Gains in Ontario

TORONTO, ONT.—A 21% gain increase in steers on pasture has been reported in Ontario through the use of an estradiol progesterone combination hormone implant. The increase reported was from 2.33 to 2.82 lb. daily.

"Results are similar to those we have obtained in Ontario with stilbestrol," said Dr. T. D. Burgess, animal husbandry researcher at Ontario Agricultural College, Guelph. "Our tests have shown that stilbestrol-treated steers outgain untreated by 20 to 30% and do it on approximately 10% less feed. The cost of stilbestrol was about 20¢ per animal."

Dr. Burgess said there are as yet unfinished problems with stilbestrol. One of them, he said, is to find out how long the hormone is active.

"We plan to compare a single implant of stilbestrol with re-implants at 100 days," said Dr. Burgess. "The test will be tried on 600-lb. steers over a 240-day feeding period, and we expect to have initial results this fall."

He also said that feeding grain on pasture might not pay with stilbestrol-treated animals. "Our first experiment indicated this," he said. "When a current 24-animal test comparing stilbestrol-implanted steers fed grain to steers fed no grain is completed, we can be more definite."

Prefab Mill Building

MOSES LAKE, WASH.—A prefabricated building which will house equipment for pelleting, rolling and mixing feeds was constructed here recently in only eight hours for the Moses Lake Feed Mill, Inc. Harry Schultz and Richard Penhallurick, owners of the new facility, said their mill will begin operation in July.

Pelleting Grass Cuts Waste, Scientist Says

STATE COLLEGE, MISS. — Pelleting grass may take some of the waste from highly fertilized, irrigated pastures, according to W. R. Thompson, agronomist for the agricultural extension service at Mississippi State University.

"When you concentrate large numbers of cattle on small acreage to graze it off, they often trample and waste more than they eat," he said. "Pelleting can save this extra growth until it is needed. By pelleting grass you can have top quality feed, where if you tried to save it as hay, rains might cause the loss of a lot of quality."

Commenting on a recent tour of Georgia and South Carolina for a study of current experiments on pelleting grass, Mr. Thompson quoted J. R. Johnson, Georgia extension agronomist, on a recent 100-day feeding test using pelleted grass:

"During a 100-day feeding period, animals fed Coastal Bermuda pelleted gained 2.56 lb. daily. Animals fed ground corn and cottonseed meal (6 to 1) gained 2.61 lb. a day, and animals fed half shelled, cracked corn and cottonseed meal and half Coastal Bermuda pellets gained 2.96 lb. per day."

Pointing out that some livestock producers field chop special grass crops and haul it to the animals rather than allowing them to graze, Mr. Thompson said farms with an extra amount of grass could use this system. Excess the cattle could not use could be pelleted and saved for future feed, he said.

Elevator Career Day Planned for June 25

EAST LANSING, MICH. — The eighth annual Elevator Career Day has been scheduled for June 25 at the Union Memorial Building, Michigan State University. It is being sponsored by the Michigan Feed & Grain Dealers Assn., the Michigan Association of Farmers Cooperatives, and the Michigan Bean Shippers Assn.

Registration will begin at 11 a.m., with a luncheon scheduled for 12 noon. After the luncheon E. G. Cherbonnier, feed consultant from St. Louis, will speak on "Your Future in Tomorrow's Agriculture," and George Greenleaf, coordinator for MSU's elevator and farm supply short course, will speak on "Michigan State's Elevator Training Program."

The remainder of the program will involve group counseling sessions, discussions and guided tours of university facilities.

Holds Open House

DES MOINES, IOWA—The Davenport Elevator Co., Des Moines, recently held an open house for about 350 feed dealers and suppliers from Iowa, Minnesota and Illinois. Tours were taken of the $225,000 warehouse and offices recently completed.

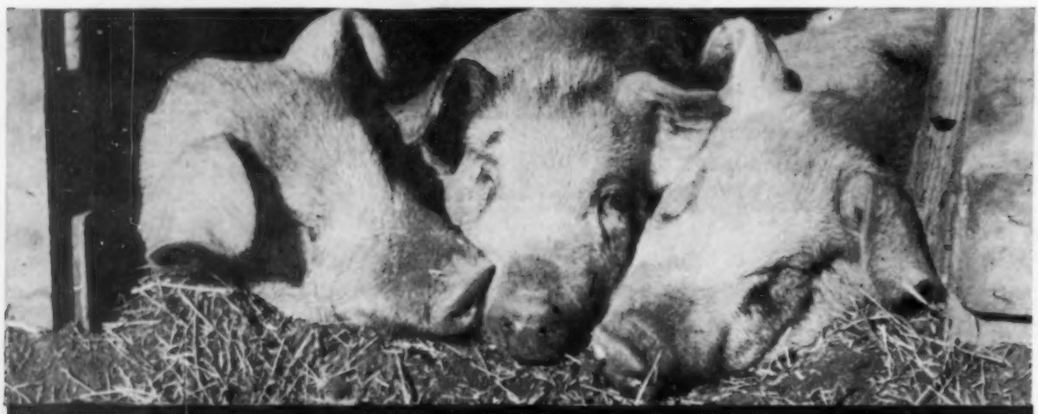
The company, which merged with the Fort Dodge Feed Co. a year ago, carries about 80 lines of ingredients, antibiotics, vitamins and poultry, hog and turkey equipment, according to C. V. Johnston, sales manager. The day was spent informally with the elevator and feed men discussing their problems with the suppliers.

Dannen Adds Storage

RED OAK, IOWA—Dannen Mills, St. Joseph, Mo., has let a contract to the Iowa-Kansas Grain Storage Co. for construction of a 200,000-bu. grain storage facility here. Gene Packwood, country station division manager for Dannen, said the new steel tank will be 75 ft. in diameter and 50 ft. high. The structure is slated for completion for corn take-over in early August.

New Broiler House

MAYVILLE, WIS.—Emmett Glenn, owner of the Glenn Milling Co. here, is completing a 40 by 280-ft. building near Horicon for a broiler operation with a capacity of 12,000 birds.



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'Cow Pool' Discussion In St. Paul June 17

ST. PAUL — What's good and what's bad about "cow pools," or large-scale feeding and management of cows for investors or for the producers themselves, will be discussed during a forum to be presented June 17 at 1 p.m. in Peters Hall, St. Paul Campus, University of Minnesota.

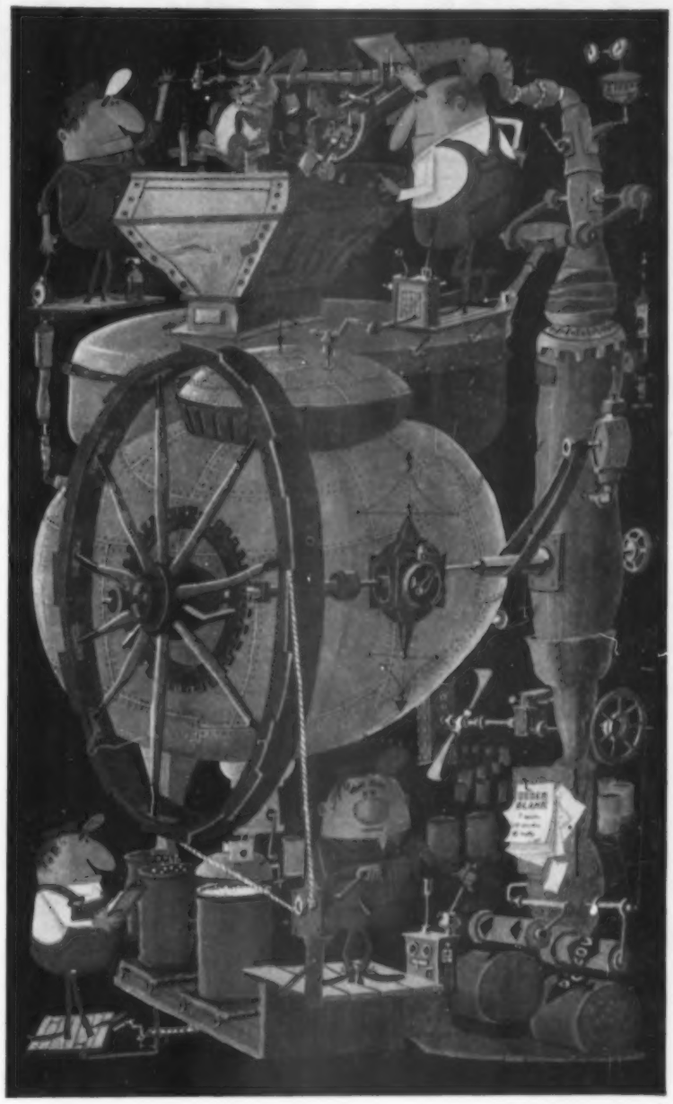
Sponsor of the symposium, open to the public, is the Minnesota Dairy Products Assn., Minneapolis.

Floyd Thompson, secretary of the association, said Dr. E. F. Koller, department of agricultural economics, University of Minnesota, will serve as moderator for the panel to be composed of: Don Hirsch, commodity division, dairy department, American Farm Bureau Federation, Chicago; Prof. H. G. Routhe, department of agricultural economics, University of Minnesota; Owen Hallberg, St. Paul Bank for Cooperatives; Dr. Gordon Sprague, Land O'Lakes Creameries, Inc., Minneapolis, and Parker Hagg, field service director, A&G Cooperative Creamery, Arcadia, Wis.

Nebraska Dehydrators

LINCOLN, NEB.—The 10th annual summer party of the Nebraska Dehydrators Assn. and Allied Industries will be held in Lexington, Neb., June 23, it has been announced by Howard W. Elm, executive secretary. Activities scheduled for the day will include golfing, boating, swimming and fishing.

DOW | FEED ADDITIVES



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NUTRITION SEMINAR OFFICERS—Getting an early start on plans for Twin City Nutrition Seminar programs for the 1959-60 season following a recent meeting which included election of officers are (from left): Don Swanson, Blomfield-Swanson, new secretary; Dr. R. M. Jordan, University of Minnesota department of animal husbandry, immediate past president and member of the program comittee; Warren Armstrong, nutritionist, Nutrena Mills, Inc., new president, and Dr. R. J. Meade, University of Minnesota department of animal husbandry, program committee chairman.

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Twin City Seminar Elects New Officers, Hears Researchers

ST. PAUL — Warren Armstrong, nutritionist, Nutrena Mills, Inc., is the new president of the Twin City Nutrition Seminar. He was elected to succeed Dr. R. M. Jordan, associate professor of animal husbandry, University of Minnesota, at the organization's final meeting of the 1958-59 season.

The group also initiated a "rotation" method of selecting a secretary for the seminar each year. J. Wesley Nelson, Cargill, Inc., who had served as secretary for four years, was succeeded by Don Swanson, Blomfield-Swanson. The office will be passed around annually among members who are representatives of feed industry firms and allied companies.

New program committee chairman is Dr. R. J. Meade, department of animal husbandry. Other members of the committee are Dr. Jordan, Dr. Jess Williams, department of dairy husbandry, and George Patrias, Hubbard Milling Co., Mankato.

Nutrition Talks

Speakers for the recent seminar program were Dr. Jordan, Dr. Williams and Dr. Paul Waibel, department of poultry husbandry.

Dr. Jordan reported that work in sheep nutrition on the university's St. Paul campus has been concerned with three general areas: Fattening lambs, suckling lambs and ewes.

He said experimental results had indicated that feeding of pellets may be of greater value at some phases of growth than at others and that tranquilizers had produced no significant rate of gain increases.

In work which involved a comparison of pellets and a meal creep ration, it was found that the meal ration produced the cheapest gains, although feeding of pellets resulted in a "slightly better" average daily gain.

Dr. Jordan said results were not significant in a study of the effect of intramuscular injections of tranquilizers on shipping shrinkage and regaining of weight by lambs.

Tranquilizers used in fattening and suckling lamb tests, in which there also were no significant results, included chlorpromazine, trifluoropermazine and hydroxyzine.

Dr. Jordan said an area open to research is "when and how to take feed away from the ewe." Work on answers to these questions, he said, would help cut feed and labor costs.

"Cow Pool" Discussed

Dr. Williams, who discussed calf feeding and nutrition of large dairy herds, showed colored slides of pictures he took recently at the Fashion Farms "cow pool" near Meservey, Iowa.

The cow-boarding idea, he said, is not new, for it has been used for some time in California and other western states, and Dr. Williams believes "it is here to stay." He declared that he sees considerable growth ahead for both cooperative and commercial cow pool ventures.

It was announced at the seminar that a symposium on cow pools, open to the public, will be presented in Peters Hall on the St. Paul campus at 1 p.m. June 17.

On the basis of tests which he has conducted with an automatic calf feeding system using milk replacer, Dr. Williams recommended that calves be at least 8 days old and preferably 12 days old before being introduced to that type of feeding. "By that time they regulate their own feeding," he said. Dr. Williams noted that placing calves on automatic calf feeding at an earlier age resulted in a problem with scours.

Dr. Williams said that pelleting of current calf feed combinations had not resulted in any advantage over a ground ration.

The growing popularity of cafeteria feeding in dairy operations was noted by Dr. Williams. He also made a point of findings which indicate that cows of "medium condition" produce most efficiently. "Maintenance of fat cows is costly," he said.

Dr. Waibel introduced two University of Minnesota graduate students who presented material from experimental work they are doing toward a master's degree in poultry nutrition. They are Frederick R. Frank and Roger Fedde.

Fumigating for Khapra Beetle Now Under Way

WASHINGTON—Khapra-beetle infestations found this year for the first time in a small area of west Texas and adjacent New Mexico are receiving prompt eradication treatments with fumigants and sprays, the U.S. Department of Agriculture reports.

The destructive stored-grain insect pest has been found in small but threatening numbers on 17 properties in El Paso, Texas; two in Hudspeth County, Texas; 11 in the adjacent area of New Mexico, and two in nearby Juarez, Mexico. Arrangements have also been made for treating the Mexican infestations. Infested locations range in size from a feeding pen for chickens to a feed manufacturing plant.

Agricultural Research Service workers first found the beetles in an El Paso feed mill late in February. Close inspection of nearby mills and warehouses began immediately.

Dr. Salsbury's Laboratories—

the Scientific Approach to Poultry Health Problems

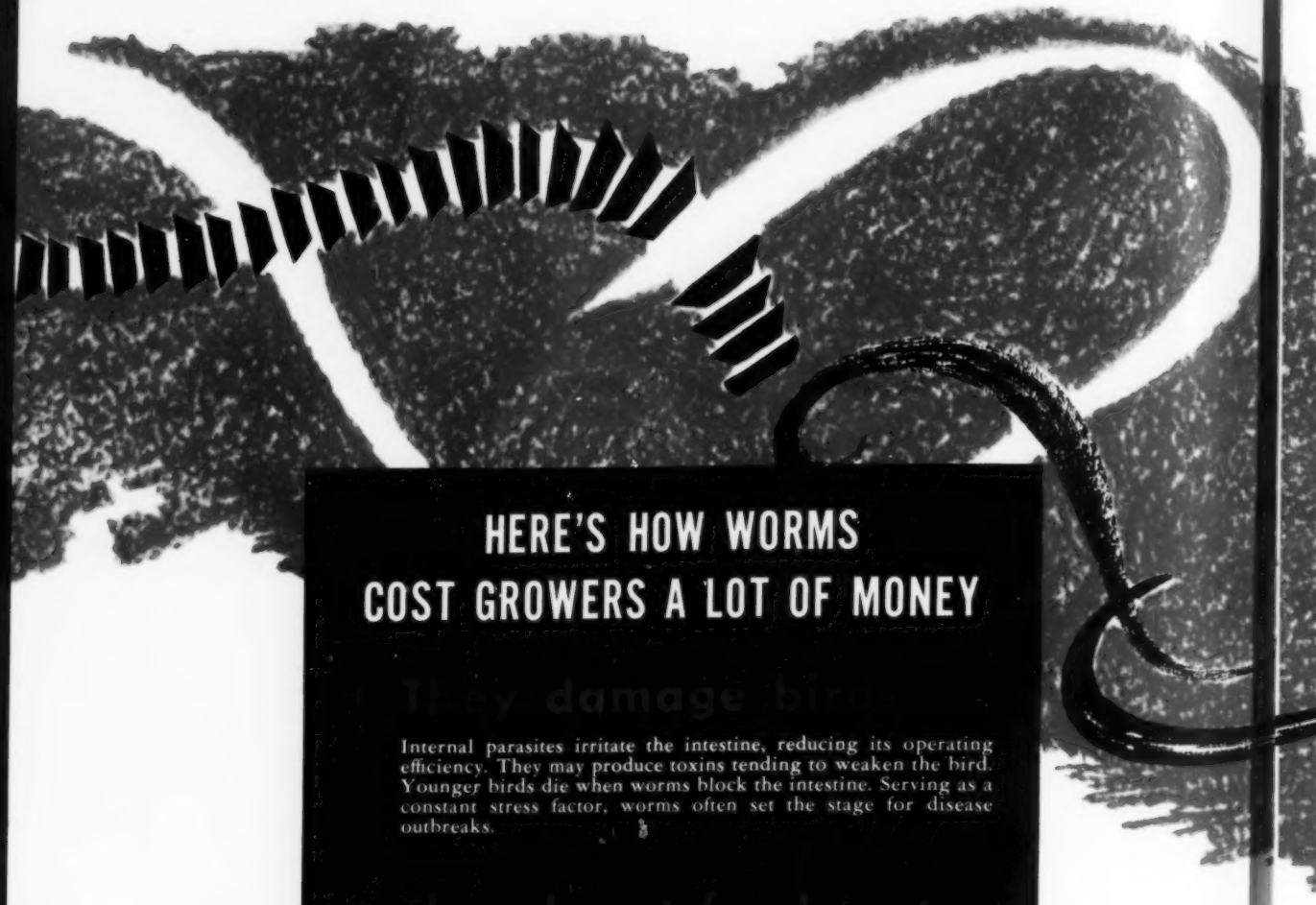
Health products that give your feeds exclusive new profit benefits

Feed manufacturers and dealers alike are vitally interested in feed products that make a profit for the user. *Profit is the major test*, so far as the grower is concerned. A feed additive must bring about a higher net profit or it will be discarded. This brochure describes certain such products from Dr. Salsbury's Laboratories, where the practical side of research is of primary concern.

HERE ARE ANSWERS TO VITAL POULTRY AND SWINE HEALTH PROBLEMS

DETACH INSERT AND FILE

Millions of dollars will be lost by growers th



HERE'S HOW WORMS COST GROWERS A LOT OF MONEY

They damage birds

Internal parasites irritate the intestine, reducing its operating efficiency. They may produce toxins tending to weaken the bird. Younger birds die when worms block the intestine. Serving as a constant stress factor, worms often set the stage for disease outbreaks.

They boost feed costs

Worms use feed which has already been digested by the bird, thus robbing it of essential nourishment. Of course, one worm has little appreciable effect but wormy flocks may have thousands of worms in all stages of development, causing poultry to waste feed.

They lower production

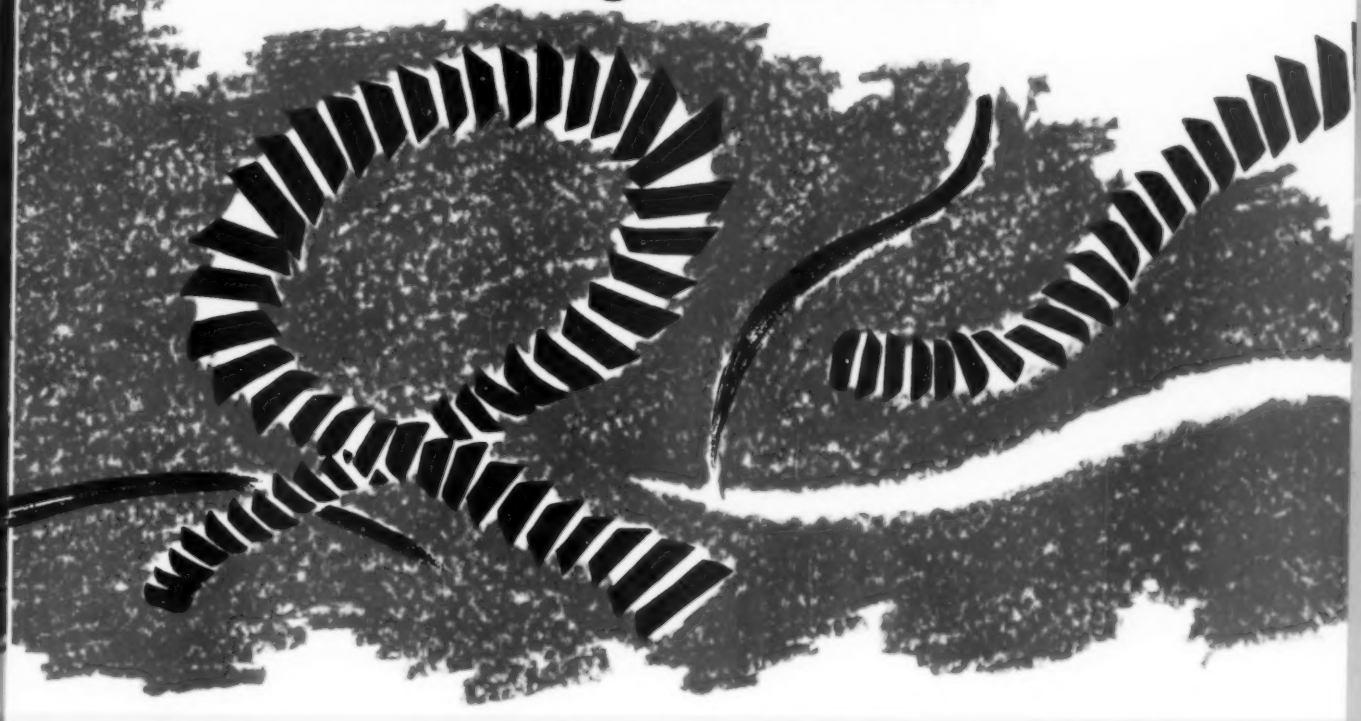
These unseen pests interfere with growth, impair development, delay maturity and reduce egg production. Growing pullets, poults, and broilers loaded down with worms seldom make profitable gains; even mild infections in laying flocks can cut production 30 dozen eggs per 100 hens per month.

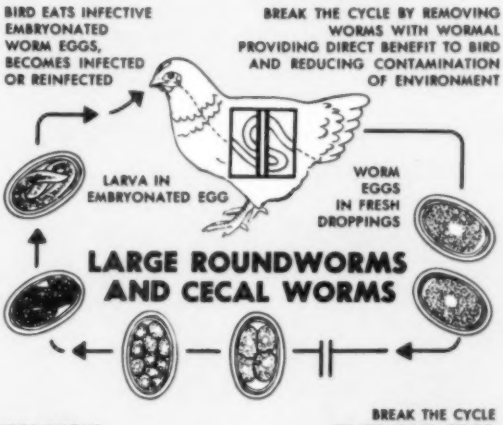
They multiply fast

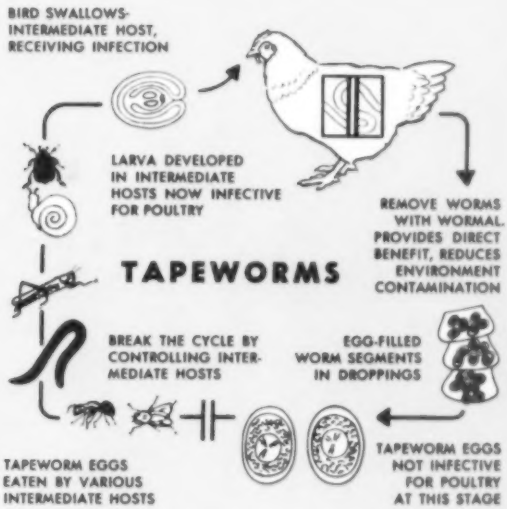
Three different types of worms cause damage of economic importance—*large roundworms, cecal worms* and *tapeworms.* Life-cycle diagrams on opposite page show the "inside story" of a worm's private life. What the diagrams do not show is the amazing rate at which worms multiply. For example, a female large roundworm lays 5,000 or more eggs daily—all of which pass off with the droppings to infect other birds and start the cycle all over again. This rate of reproduction is why the worm problem gets steadily worse in unprotected flocks.

year, due to many species of poultry worms

Stopping Roundworms is only a small start.
A complete worm control program requires a wormer that "gets all 3" – Tapeworms and Cecal Worms as well as Large Roundworms.




BIRD EATS INFECTIVE EMBRYONATED WORM EGGS, BECOMES INFECTED OR REINFECTED
BREAK THE CYCLE BY REMOVING WORMS WITH WORMAL PROVIDING DIRECT BENEFIT TO BIRD AND REDUCING CONTAMINATION OF ENVIRONMENT
LARVA IN EMBRYONATED EGG
WORM EGGS IN FRESH DROPPINGS
LARGE ROUNDWORMS AND CECAL WORMS
EGGS BECOME EMBRYONATED IN 10 DAYS UNDER FAVORABLE CONDITIONS, MAY REMAIN ALIVE FOR MANY MONTHS
BREAK THE CYCLE BY REDUCING OPPORTUNITY FOR INFECTION. MAINTAIN LITTER OR RANGE IN GOOD CONDITION, AVOID OVERCROWDING


BIRD SWALLOWS-INTERMEDIATE HOST, RECEIVING INFECTION
LARVA DEVELOPED IN INTERMEDIATE HOSTS NOW INFECTIVE FOR POULTRY
REMOVE WORMS WITH WORMAL. PROVIDES DIRECT BENEFIT, REDUCES ENVIRONMENT CONTAMINATION
TAPEWORMS
BREAK THE CYCLE BY CONTROLLING INTERMEDIATE HOSTS
EGG-FILLED WORM SEGMENTS IN DROPPINGS
TAPEWORM EGGS EATEN BY VARIOUS INTERMEDIATE HOSTS
TAPEWORM EGGS NOT INFECTIVE FOR POULTRY AT THIS STAGE

AND HERE'S HOW TO CONTROL WORMS

DETACH INSERT AND FILE

Dr. Salsbury's

WORMAL

THE ONLY COMPLETE POULTRY WORMER

WORMAL takes the guesswork out of worming

Some worming treatment is necessary, because it is practically impossible to raise birds that are not heavily infected with worms. Unfortunately, no single drug is equally effective against all 3 major types of worms. And few growers are skilled at posting or diagnosis, so that the kind of worms might be incorrectly identified. Thus a grower runs the risk of wasting money by using the wrong worming compound. All this spells out the need for a broad-range wormer, one that gets *all 3 types of worms*. WORMAL is such a wormer. It is the *only* wormer that gets all 3—takes the guesswork out of worming!

Here's why growers prefer WORMAL granules

1 Wormal is the only feed additive wormer that removes large roundworms, cecal worms and 6 species of poultry tapeworms.

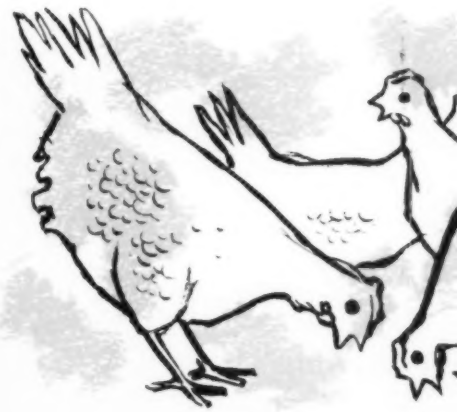
2 Easy to feed. Wormal fits most feeding programs—all mash, or controlled mash-and-grain.

3 Wormal is safe, causing no shock or setback.

4 Palatable. Feed mixtures containing Wormal are readily eaten by chickens and turkeys.

5 One standard dose for birds of all ages. One pound of Wormal treats 250 birds of any age. Mix at rate of 20 lbs. per ton of mash.

WORMAL . . . the most effective wormer for chickens, broilers, turkeys



in your poultry feeds lets you offer your customers the utmost protection against costly worm damage

only WORMAL contains dibutyltin dilaurate, plus piperazine and phenothiazine

These three drugs combine to make the safest, most effective poultry anthelmintic known today. **Dibutyltin dilaurate,** a development of Dr. Salsbury's Laboratories, is available only in Wormal. It is the only flock tapewormer that removes 90% or more of the 6 commonest species of chicken tapeworms—*heads and all.*

Controlled tests show that piperazine removes 95% to 100% of large roundworms from chickens and turkeys. It works fast, is palatable, and does not interfere with normal feed consumption.

Phenothiazine, the third drug in Wormal, is one of the most widely used worming compounds known to veterinary science. It is also one of the most effective—removing 95% to 100% of cecal worms from poultry.

TREATMENT SUPPLEMENTS SANITATION

Commercial Flocks...

are usually raised on clean range, thus reducing the degree of infection. However, for best results, sanitation should be supplemented by a regular worming program—Wormal at 8, 12, 16 and 20 weeks for maximum worm control.

Utility Flocks...

often show a much higher worm infection than commercial birds because not enough attention is paid to clean range and other good management practices. Thus, there is an even greater need for a good worming program. After pullets are housed, Wormal should be used every 30 days if necessary.

Turkeys...

Worm infections in turkeys are on the increase, especially where poults are raised on the same range or litter year after year. Wormal Granules keeps worms under control when fed at the rate of one pound to 100 pounds of mash for each 250 birds. For growing birds, feed as the sole ration until consumed.

WRITE, WIRE OR PHONE

for more complete information on WORMAL. Or, if you wish, a Dr. Salsbury's technical service adviser will arrange to call and personally answer your questions about using WORMAL in your feeds.

DETACH INSERT AND FILE

These other Dr. SALSBURY'S products can give

UNISTAT®

PREVENTS COCCIDIOSIS BEST

for chicks, broilers, growing chickens

UNISTAT not only provides superior protection against coccidiosis—it also gives growers other important benefits, such as *better coloring*, *faster growth*, and *increased feed efficiency*. Of these, the last is most important. Birds must make top gains per pound of feed.

EFFICIENCY UP 10 POINTS

Thousands of flocks have demonstrated that UNISTAT-fed broilers need *less feed per unit of gain*. One grower (name on request), who raises a million broilers a year, says, "Our feed efficiency has improved more than 10 points over last year and we've had no trouble with coccidiosis. We feel that the coloring, finish, and quality of our birds has been greatly improved withUNISTAT and we're now using it 100%."

WRITE, WIRE OR PHONE

for Feed Manufacturer's Guides on 3-NITRO and/or UNISTAT. They answer many questions about the use of these products in your feed.

3-NITRO®

POWDER

THE ARSENICAL OF CHOICE

for chickens, turkeys, swine

Over half of the commercial broilers raised each year get 3-NITRO in their feed because its use is highly profitable. Certain experimental results have indicated an extra profit of $21.50 per 1,000 birds from the use of 3-NITRO. Laying flocks have averaged 12 extra eggs per hen per year and on ¼ lb. less feed per dozen eggs. 3-NITRO *promotes faster growth, improves feed-efficiency, increases egg production, reduces flock depletion, promotes better feathering* and *coloring*. These are reasons why growers say, "*No other feed ingredient does so much—and costs so little—as 3-NITRO.*"

LEANER HOGS

Today's consumer wants lean red meat, not wasty fat. Tests have shown that 3-NITRO reduces backfat and improves carcass leanness. 3-NITRO has long been known for its effect in producing faster, cheaper gains. This new benefit—leaner pork—is attracting even more farmers to 3-NITRO.

your feeds exclusive profit-making benefits

POLYSTAT®

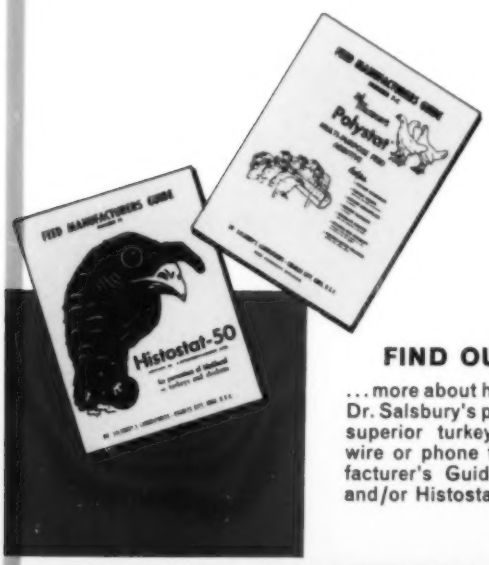
A BROAD-RANGE HEALTH PROTECTANT

for chickens and turkeys

POLYSTAT helps chicks and poults start faster . . . grow into stronger, healthier birds, the kind that *return highest profits*. There is less mortality, less sickness, and better all-around health and appearance, when feeds contain POLYSTAT. In addition, POLYSTAT eliminates the need for a separate coccidiostat, a separate wormer, and a separate growth stimulant. These are reasons why thousands of successful growers say there is no other product with the wide range of profit benefits supplied by POLYSTAT.

IF BLACKHEAD IS NO PROBLEM

. . . keep birds on POLYSTAT throughout the growing period. However, if protection against blackhead is required, a change to Histostat-50 should be made, as described at right.



FIND OUT NOW

. . . more about how to use these Dr. Salsbury's products to build superior turkey feeds. Write, wire or phone for Feed Manufacturer's Guides on Polystat and/or Histostat-50.

HISTOSTAT®-50

BEST FOR BLACKHEAD PREVENTION

also promotes finer finish

When poults go on range, feeds containing HISTOSTAT-50 will prevent losses from blackhead. HISTOSTAT-50 should be used earlier if blackhead has been causing trouble in brooder house. Its new, improved formulation permits the active ingredient to do its work more completely and effectively—especially as birds approach market age or maturity. Palatable—turkeys like it. It's economical—2 birds saved more than pays for treating 100 with HISTOSTAT-50. And they finish better, with higher market value.

CHAMPION TURKEYS RAISED ON HISTOSTAT

Year after year, the champion birds at carcass shows were raised on HISTOSTAT. It's been proved on millions of turkeys. And new HISTOSTAT-50 contains the same proven active ingredient—4-nitrophenylarsonic acid—from the chemical family of arsenicals, which are universally recognized for their growth-stimulating properties.

THESE FREE SERVICES ARE YOURS FOR THE ASKING

AUTHORITATIVE COUNSEL. Available to you is the counsel of more than a score of Dr. Salsbury's scientists in the fields of poultry and animal health, chemistry, microbiology, protozoology, and helminthology, working with the most modern equipment in one of the largest commercial poultry—and animal—health laboratories in the world. These experts are at your service for any advice you may need regarding feed medication.

PATHOLOGICAL SERVICE. Dr. Salsbury's Laboratories offer you the professional diagnostic opinion you may need for providing the proper medicated feeds to cope with unusual flock health problems.

TECHNICAL SERVICE ADVISERS. A group of trained specialists, experienced in feed medication, will come and confer with you. They bring the entire technical resources of Dr. Salsbury's Laboratories to your aid.

SERVICE TRAINING COURSE. Dr. Salsbury's Laboratories have over 25 years' experience in training dealers, field servicemen, and poultrymen in the essentials of poultry health. Short courses in poultry, broiler, and turkey subjects—taught by leading scientists and educators—can help your staff render a better service.

SCIENTIFIC INFORMATION SERVICE. An extensive series of Feed Manufacturer's Guides, bulletins, and reports of research covering practically every field of poultry health, will be sent to you regularly.

FIELD SERVICE. One-fourth of Dr. Salsbury's total staff—or about 100 men—are constantly in the field, providing service. These men have an average of 12 years' experience with the Laboratories. They know poultry, and they are always ready to assist you with feed medication.

During the many years they have served the feed industry, Dr. Salsbury's Laboratories have developed a field staff of experienced men who are fully qualified to help you with feed formulation. This staff, like the other services listed here, is unequalled in the entire industry. These men can help you build better feeds. Shown above is one of the Poultry Short Courses at Charles City. Here dealers, field servicemen, and poultrymen get first-hand training in the essentials of poultry health. Please write, wire or phone for further information. Regardless of your size or location, your request will get immediate and personal attention.

MEDICATION ALONE IS NOT ENOUGH

Because good husbandry is always necessary for a feed product to do its best work, Dr. Salsbury's current consumer advertisements carry this message: PROPER MEDICATION IS ONLY ONE PART OF GOOD FLOCK OR HERD MANAGEMENT. FOR BEST RESULTS, PRACTICE SOUND FEEDING, HOUSING, SANITATION AND PEST CONTROL.

Dr. SALSBURY'S LABORATORIES

NATIONWIDE SERVICE TO THE FEED INDUSTRY

South Dakota Reports On Hygromycin

BROOKINGS, S.D.—Effective control of the large intestinal roundworm in swine was gained with hygromycin in a South Dakota Agricultural Experiment Station feeding trial reported recently.

A report of the trial was made by Dr. Richard Wahlstrom of the animal husbandry department in South Dakota Farm and Home Research, station publication.

He said complete control was obtained when hygromycin was fed to growing-finishing pigs from weaning to market and incomplete, but effective, control was obtained by feeding the compound to 100 lb. liveweight.

An increase in rate of gain also resulted during the initial feeding period, but when hygromycin was fed from 100 lb. to market weight it appeared to reduce feed consumption and daily gains, he said.

"Because of this fact, and since almost complete protection against roundworms was obtained by the shorter feeding period, it is recommended that hygromycin be used only to a weight of approximately 100 lb.," Dr. Wahlstrom said.

Hygromycin apparently does not cause a growth response similar to other antibiotics, he said. The experiment showed that both hygromycin and Aureomycin produced increased gains in pigs from weaning to 100 lb. liveweight (12% and 6% increase, respectively). When combined, the two antibiotics produced an increased gain of 22% over the control pigs during this period.

"Thus best over-all results would be expected from a combination of hygromycin and some other antibiotic up to 100 lb., and, at that time, removal of the hygromycin with continued feeding of the other antibiotic," he said.

He also pointed out that more recent work at South Dakota indicates that hygromycin can be mixed in protein supplements fed free-choice with grain, and it will also effectively eliminate roundworms.

Appointed by Carnation

LOS ANGELES—The appointment of B. C. Flounders as advertising manager of Carnation Co.'s pet foods division has been announced by Paul H. Willis, Carnation vice president for advertising. Mr. Flounders is a graduate of Dartmouth College, Hanover, N.H., and Tuck School of Business Administration. He has served as brand manager with the Kendall Co. and most recently was an advertising product manager with the Scott Paper Co.

Dates for Oklahoma Conference Changed

STILLWATER, OKLA.—A change in dates for the annual Oklahoma Formula Feed Conference has been announced by Dr. Rollin Thayer, poultry nutritionist at Oklahoma State University and chairman of the conference committee.

The dates are Nov. 6-7—not Oct. 23-24 as previously announced. This is a Friday and Saturday meeting rather than the usual Thursday and Friday schedule, Dr. Thayer said.

He said those who wish reservations at the Student Union should make them immediately. Persons who had made reservations prior to the date change do not need to change them, since the change has been made for them. He reminded those with reservations at motels and hotels, however, that the change should be made by them.

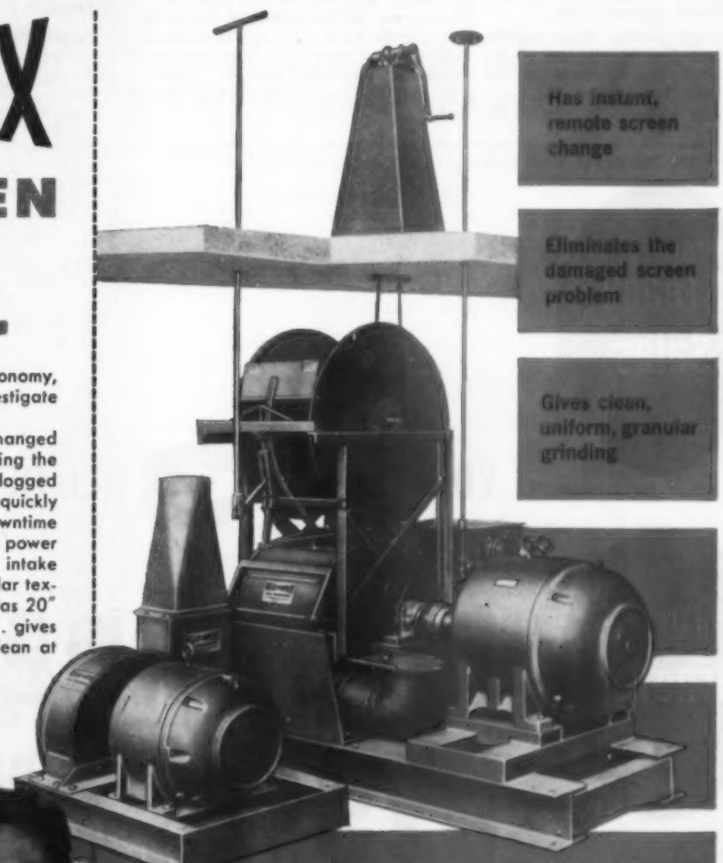
KELLY DUPLEX

REMOTE SCREEN CHANGE HAMMERMILL

Whether you are interested in speed, convenience, economy, capacity or quality of grind . . . it will pay you to investigate the Kelly Duplex Remote Screen Change Hammermill.

Here are just a few reasons why: • Screens can be changed instantly by a single turn of a crank . . . without stopping the mill . . . and without leaving the service floor • Torn or clogged screens, regardless of the amount of damage, can be quickly and easily removed and replaced without costly downtime • Mill is guaranteed to grind more grain with the same power than any other make—or your money back • Special intake arrangement assures a clean, uniform product of granular texture . . . mill does not whip feed into a floury dust • Has 20" throat—delivers high capacities • Built low to floor . . . gives you a larger pit area • Separate blower keeps mill clean at all times • Heavy steel construction throughout assures top performance and long life under hardest use.

Make your own "point-for-point" comparison. Mail card today for literature and full details. See for yourself how much more you get with a Kelly Duplex Remote Screen Change Hammermill . . . and how much more it will do for you.



"In our elevator at New Hope, Ohio, we have a Kelly Duplex Remote Screen Change Hammermill powered by a 75 HP motor on the mill and a 30 HP motor on the blower. It saves us time and steps in servicing customers . . . and gives us a product that looks like it had gone through a grader to get a more even grind. I would recommend this mill to anyone."

Bob Armacost

CLIP ALONG THIS LINE . . . FOLD OVER, FASTEN . . . AND MAIL TODAY!

FIRST CLASS
Permit No. 72
(Sec. 34.9 P.L.&R.)
SPRINGFIELD, OHIO

VIA AIR MAIL

BUSINESS REPLY ENVELOPE
No postage necessary if mailed in the United States

— POSTAGE WILL BE PAID BY —

The Duplex Mill and Manufacturing Company
Springfield, Ohio

FOLD OVER ON THIS LINE . . . FASTEN (STAPLE, GLUE, TAPE)

The Duplex Mill & Mfg. Co.
Springfield, Ohio

Yes, I'm interested in the KELLY DUPLEX machinery checked at the right. Please send me full information on these machines without any obligation.

Layout service and planning details available without cost.

☐ Remote Screen Hammermill
☐ Vertical Feed Mixer
☐ Vertical Screw Elevator
☐ Electric Truck Hoist
☐ Portable Screw Elevator
☐ Corn Cutter and Grader
☐ Corn Sheller with Blowers
☐ Pitless Corn Sheller
☐ Regular Corn Sheller
☐ Magnetic Separator
☐ Cob Crusher
☐ Bucket Elevator
☐ Pit Auger
☐ Chain Drag
☐ Twin Molasses Mixer
☐ Instant Screen Hammermills
☐ Corn Crusher-Regulator
☐ Grain Blower
☐ Corn Scalper
☐ Mill Blower
☐ Grain Feeder
☐ Electric Bag Cleaner
☐ Forced Air Carloader
☐ Complete Line Catalog

NAME .....

TITLE .....

FIRM ..... PHONE .....

CITY ..... STATE .....

New 'Feeding Practices' Edition Now Available

DALLAS — The 1959 edition of "Feeding Practices," published by the National Cottonseed Products Assn. as a service to livestock and poultry producers, pays tribute to the progress of animal agriculture which has resulted from development and use of superior feeding information.

The bulletin also points out how greater future achievements will be realized through practical application of feeding knowledge yet unknown or unused.

The primary objective of the bulletin is to blend into practical feeding practices the essential knowledge of the characteristics and functions of feeds and the nutritive requirements of various types of livestock and poultry, association officials said. It stresses the fundamental importance of efficient production but emphasizes that production efficiency is meaningful only when achieved economically.

The 48-page bulletin gives specific feeding recommendations and standards for each class of livestock and poultry. Suggested feeding and management practices are illustrated by liberal use of colored and black and white photographs.

Persons may obtain a free copy of the bulletin from cotton oil mills or by ordering directly from the research and educational division of the National Cottonseed Products Assn., 618 Wilson Bldg., Dallas 1, Texas.

Speaker Paints Bright Poultry Outlook

PUCKETT, MISS.—A bright outlook for the poultry industry was expressed by Benny Rogers, Morton, Miss., speaking before a group of poultrymen, bankers and businessmen in Puckett recently. He is one of Mississippi's leading poultry processors.

Mr. Rogers said that despite the fact that since last September the price has not been as favorable as it was, he believes an upturn will come by July 1 in the poultry industry.

As an indication of his faith in the business, Mr. Rogers said that since September he has increased his birds on feed by 1.5 million, and is increasing that by another half million before July 1. At that time, he pointed out, he will have 5 million birds being fed.

New Brucellosis Test Method Announced

WASHINGTON — A new method for improving the testing of range cattle for brucellosis has been approved for use starting this summer in the western cattle states, the U.S. Department of Agriculture announced.

The new system, based on blood testing dry and cull cows on the way to or during commercial slaughter, rather than testing animals on the range, provides an inexpensive, convenient method for screening beef herds for brucellosis, USDA said.

For several years, dairy producers have had a test—the milk ring test — of comparable convenience, which has enabled them to make faster progress than beef producers toward the national goal of brucellosis eradication.

Raymond Bag Gains Supply Facilities

MIDDLETOWN, OHIO — The installation of new manufacturing equipment by the Halifax Paper Co., Roanoke Rapids, N.C., will "mean further insurance of adequate kraft paper supplies for all our production requirements," according to J. R. Clements, president, Raymond Bag Corp., Middletown.

Both Raymond and Halifax are divisions of the Albemarle Paper Manufacturing Co., Inc., Richmond, Va. Halifax is a paper supplier for Raymond's production of multiwall bags.

The new equipment, scheduled to begin operation about June 1, will almost double Halifax kraft paper production. Initial production scheduled for the new unit will be about 250 tons of kraft paper and paperboard daily, with a maximum capacity of more than 425 tons.

Mr. Clements said expansion at the sister division's Roanoke Rapids plant will "assure stability of supply to all our customers, regardless of fluctuations in the general paper market."

IT'S OFFICIAL— CHICKEN'S DAD'S DISH

GEORGETOWN, DEL. — Mother's getting a nudge to put chicken on the menu for Dad on Father's Day, June 21. Word from the Delmarva Poultry Industry, Inc., Georgetown, says chicken has been named the official dish for the annual observance.

At a recent meeting in New York City, Alvin Austin, director, National Father's Day Council, asked representatives of the Delmarva Poultry Industry, Inc., to select a suitable recipe for Father's Day from among past winners of the national chicken cooking contests.

The Delmarva group is representing the nation's poultry industry on the council's sponsoring group this year.

New 'Green Pastures' Publication Announced

BURLINGTON, VT.—A new publication, Green Pastures in Winter, prepared and printed by the six New England Extension Services, has been distributed to 30,000 dairymen to help promote the Green Pastures program.

The magazine is the second such cooperative effort produced by the states. The issue is designed to help dairymen learn more about producing and using top grade roughage as well as improving management.

The 18 articles appearing in the issue are written by authorities on such subjects as good silage, grassland farming, forage harvester, mechanical forage feeding, haymaking methods, grain usage, handling young stock, dairy rations and others.

John W. Spaven, Vermont extension editor, was editor of the 32-page publication.

Steady Sales

Quick Turnovers

Good Profits

YOU GET ALL 3 ALL OF THE TIME

when you push . . .

PILOT BRAND OYSTER SHELL

Consumption of PILOT BRAND Oyster Shell continues without interruption . . . day in and day out, every day of the year. Hens and turkeys, chicks and poults must have it because calcium carbonate is as important to their lives as water.

It is this constant use, plus the fact that pure, 100% usable PILOT BRAND is the largest selling eggshell material in the world, that causes progressive dealers everywhere to always stock and push PILOT BRAND as a matter of course. It always brings steady sales and good profits. And turnovers are so fast, you never have much money tied up in stock.

Order from your distributor . . . or write to us.

PILOT BRAND OYSTER SHELL FOR POULTRY

Oyster Shell Products Company
Mobile, Alabama

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Free...
YOUR COPY OF THE LATEST EDITION OF "FEED and GRAIN PROCESSING EQUIPMENT"
BARNARD & LEAS Manufacturing Company INC.
CEDAR RAPIDS, IOWA

Farm and Feed Salt NEWS

FROM INTERNATIONAL SALT COMPANY, INC.

Smart Idea for Extra Summer Profits

- Take advantage of increased need for salt!
- Display colorful bags, blocks, Liks of Sterling Salt!
- Help compensate for lower sales of mixed feeds!

Livestock in summer usually eat less mixed feeds . . . hence get less salt. Also, cattle on pasture need *more* salt.

A colorful, compact Sterling Salt display is a sure-fire way to remind customers to buy this salt from *you*. Powerful Sterling Salt advertising in Farm Journal, Farm Quarterly, Progressive Farmer, Co-operative Farmer and American Agriculturist tells farmers that cattle need salt and minerals, that their hay should be salted and that Sterling dealers also carry salt for asparagus beds and for water softeners. This advertising *makes sales* from your display.

Order plenty of Sterling Salt to cover this extra summer business—*now!*

QUALITY STERLING FARM SALT PRODUCTS

STERLING BLUSALT: high-quality salt with seven trace minerals (manganese, iron, sulfate sulfur, copper, cobalt, iodine and zinc) in scientifically derived proportions. Available in 100- and 50-lb. bags, 50-lb. blocks and 4-lb. Liks.

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Want service with your salt?

You can get it from International Salt Company's Animal Nutrition Department. Located in Watkins Glen, New York, this department does continuing research into the proper use of salt and trace minerals in modern livestock and poultry feeding programs. This is your department to consult at any time for advice on mixing or feed-formula problems and for information on any of the Sterling Salt products.

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Whatever your product—and whatever your magnetic problem—you'll find the answer in this handy booklet. Write today to

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Members: American Feed Manufacturers Association
The Grain and Feed Dealers National Association

'DELMARVALOUS'—Rep. Thomas F. Johnson (D., Md.), Berlin, Md., and Sheldon Chandler (right), Berlin (Md.) Milling Co., are shown biting into chicken that cost $100 a plate. The dinner was sponsored by the Delmarva Poultry Industry, Inc., to raise funds for poultry promotion. The fund drive brought a total of $118,000.

Delmarva Dinner Gains $118,000 Fund for Promotion of Poultry

SALISBURY, MD. — Despite the current depression in the broiler industry, Delmarva poultry producers and allied industries contributed $118,000 recently to promote "Delmarvalous" chicken.

The money was secured through a $100-a-plate chicken dinner held annually by the Delmarva poultry industry to secure promotion funds. The donation of $118,000 was just short of the goal of $125,000.

Gratification at the size of the donation was indicated by poultry industry officials who noted that broiler prices have been low—much of the time below the cost of production—since last fall. The average March price in Delmarva, for example, was 18¢, compared with 22¢ a year earlier. The April price was 17¢—a drop of 3¢ from a year earlier. Last year's donation was $123,000.

Webb Cassell, Salisbury, headed the drive.

A breakdown showed that nearly 2,500 persons had contributed. Twenty-two gave $1,000 or more, and the Eastern Shore Poultry Growers Exchange was the biggest contributor with a donation of $15,000. Another 22 gave $500 or more. Processing and supply plant employees gave the fund more than $3,000, and many growers gave $1 for each 1,000 birds of capacity on their farms.

A large donation also came from businesses in Delmarva which have no direct connection with the poultry industry.

Included among the diners were representatives of the University of Maryland and the University of Delaware and Maryland and Delaware political figures. Other special guests included: Harold M. Williams, Chicago, president, Institute of American Poultry Industries; Vern Steckley, Kendallville, Ind., president, American Poultry & Hatchery Federation; Stephen Urner, New York, Poultry & Egg National Board; Lloyd Geil, Chicago, PENB general manager; E. F. Smith, Jr., Ellicott City, Md., president of the Northeastern Poultry Producers Council, and Frank Frazier, Richmond, Va., executive vice president, National Broiler Council.

Featured speaker of the dinner was Dr. Carl S. Winters, pastor, First Baptist Church, Oak Park, Ill., a well-known banquet and commencement speaker.

Full PENB Support Voted by N. E. Branch

BOSTON, MASS. — Unanimous opinion favoring a national policy for the Poultry & Egg National Board to continue as the source of consumer information and promotional activities for all poultry products was voiced at the recent annual meeting of the New England branch of the PENB.

The group also unanimously voted that every means possible be taken to keep the Boston office in order to insure continued active promotion in New England and generous support by the industry.

In the absence of New England Branch advisory board chairman James J. Warren, Jr., vice chairman Douglas J. Hayes presided.

Harry A. Grant, Wirthmore Feeds, Inc., Waltham, Mass., presented PENB certificates of merit to representatives of Connecticut, New Hampshire and Massachusetts — the three New England states rated among the nation's leading 12 in accomplishment toward reaching 1958 quotas.

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Grasselli Chemicals Department, Nutrition & Therapy Section, Wilmington, Delaware

Atlanta 8, Ga., 739 W. Peachtree St.
Cleveland 14, Ohio, 1321 Nat'l City Bank Bldg.

Milk cows and production of milk, milkfat, and butter on farms, by States, 1958 1/

State and division	Number of milk cows on farms 2/	Production of milk and milkfat 3/					Butter churned on farms
		Per milk cow		Percentage of fat in milk	Total		
		Milk	Milkfat		Milk	Milkfat	
	Thousands	Pounds	Pounds	Percent	Mil. lb.	Mil. lb.	1,000 lb.
Me.	101	6,700	268	4.00	677	27	1,800
N. H.	54	6,600	254	3.85	356	14	280
Vt.	263	6,620	261	3.95	1,741	69	240
Mass.	101	7,740	294	3.80	782	30	122
R. I.	16	8,150	306	3.75	130	5	8
Conn.	97	7,530	282	3.75	730	27	130
N. Y.	1,280	7,680	276	3.60	9,830	354	800
N. J.	138	8,180	303	3.70	1,129	42	100
Pa.	930	7,120	267	3.75	6,622	248	2,100
N. Atl.	2,980	7,382	274	3.71	21,997	816	5,580
Ohio	788	6,820	263	3.85	5,374	207	1,800
Ind.	514	7,200	264	3.95	3,701	146	800
Ill.	719	7,050	264	3.75	5,069	190	1,400
Mich.	759	7,290	270	3.70	5,533	205	1,200
Wis.	2,230	8,070	295	3.65	17,996	657	300
E. N. Cent.	5,010	7,520	280	3.73	37,673	1,405	5,500
Minn.	1,335	7,290	255	3.50	9,739	341	480
Iowa	954	6,460	239	3.70	6,163	228	1,550
Mo.	759	5,030	206	4.10	3,818	157	4,100
N. Dak.	324	5,400	192	3.55	1,750	62	2,400
S. Dak.	289	5,100	178	3.50	1,474	52	1,350
Nebr.	380	5,560	200	3.60	2,113	76	2,100
Kans.	394	5,240	199	3.80	2,065	78	1,800
W. N. Cent.	4,436	6,114	224	3.66	27,122	994	13,780
Del.	31	6,330	241	3.80	196	7	40
Md.	229	6,680	254	3.80	1,530	58	550
Va.	372	5,560	222	4.00	2,068	83	8,100
W. Va.	171	4,650	184	3.95	795	31	4,100
N. C.	353	4,930	197	4.00	1,740	70	12,600
S. C.	146	4,140	168	4.05	604	24	3,400
Ga.	290	4,080	165	4.05	1,183	48	8,950
Fla.	214	5,220	214	4.10	1,117	46	630
S. Atl.	1,806	5,112	203	3.97	9,233	367	38,370
Ky.	566	4,580	190	4.15	2,592	108	5,300
Tenn.	589	4,060	175	4.30	2,391	103	8,700
Ala.	324	3,360	143	4.25	1,089	46	11,500
Miss.	479	2,960	129	4.35	1,418	62	8,800
Ark.	291	3,760	158	4.20	1,094	46	5,500
La.	265	2,970	125	4.20	846	36	2,000
Okla.	343	4,580	176	3.90	1,556	60	3,100
Tex.	689	4,370	175	4.00	3,011	120	7,600
S. Cent.	3,566	3,983	163	4.15	13,991	581	52,500
Mont.	90	5,560	206	3.70	500	18	980
Idaho	213	7,390	281	3.80	1,574	60	460
Wyo.	36	5,730	201	3.50	206	7	350
Colo.	136	6,250	228	3.65	850	31	770
N. Mex.	46	4,940	188	3.80	227	9	300
Ariz.	51	8,140	293	3.60	415	15	100
Utah	100	7,470	273	3.65	747	27	250
Nev.	14	6,550	236	3.60	92	3	70
Wash.	251	7,560	306	4.05	1,898	77	990
Oreg.	180	6,250	269	4.30	1,125	48	720
Calif.	869	8,730	327	3.75	7,586	284	800
West.	1,986	7,664	292	3.80	15,220	579	5,730
U. S.	19,784	6,330	240	3.79	125,236	4,742	121,460

1/ Preliminary.
2/ Average number on farms during year excluding heifers not yet fresh.
3/ Excludes milk sucked by calves.

MILK PRODUCTION BY STATES—Milk cows on farms in the U.S. produced an estimated 125,236 million pounds of milk during 1958, the U.S. Department of Agriculture reports. This was 703 million pounds less than the previous year. The decrease in number of cows more than offset the record high amount of milk produced per cow. Cow numbers totaled 3% fewer than the previous year and the smallest number since annual estimates were started in 1924. Total milk production increased about 1% from 1957 in both the north Atlantic and east north central regions, but decreased in other parts of the nation. Output was down in 33 states. The other 15 recorded upturns, with all-time high annual output in seven states including Wisconsin, Minnesota and Pennsylvania. This table shows the production by states and numbers of milk cows.

Cesco Dumper Maker Designated for East

LOS ANGELES, CAL.—The Cesco Dumper, electric-powered skip hoist conveyor, will now be manufactured and distributed exclusively in the eastern half of the nation by Conveyors & Dumpers, Inc., West Orange, N.J., according to an announcement by Henry W. Boone, manager of industrial sales for Colson Equipment & Supply Co., Los Angeles, owner of the Cesco Dumpers. Distribution in western states will continue to be handled from Colson's Los Angeles plant, Mr. Boone said.

The Cesco Dumper is a cable and pulley-operated vertical conveyor that lifts, up ends and dumps bags, barrels, boxes and similar packages. Company officials said it has a lifting capacity ranging from 100 to 1,500 lb. and can handle up to 100 loads per hour.

Portable models have standard dumping heights from 6 to 10 ft. Stationary models are available for dumping heights up to 20 ft.

GRAIN STORAGE ADDITION

FOREST CITY, IOWA — Ray Schoon, manager of the Farmers Co-operative Elevator Assn. at Forest City, has announced that work has started on the construction of a new co-op grain storage building.

Time to turn to quality

(the profits come naturally)

RED W BRAND Protein Concentrates

You can be *enthusiastic* in recommending RED W BRAND protein concentrates to any farmer or feeder. Hogs and poultry are by nature meat eaters. They need the unisolated growth factors present in natural protein and feeding fat. RED W BRAND is nature's own formula—carefully controlled in processing by Wilson for quality, uniformity, purity. The potency of this natural formulation continues effective generation after generation.

When you sell RED W BRAND Meat and Bone Scraps, Digester Tankage, and Vitagen Feeding Fat, you're giving your customer the high energy feed he needs. RED W BRAND builds repeat business...puts meat on the animal, money in the till.

Animal Protein Concentrates and Vitagen Feeding Fat

The BEST Ingredients Make BETTER Feeds

RED W BRAND 50% Meat and Bone Scraps
RED W BRAND 60% Digester Tankage
RED W BRAND Steamed Bone Meal
RED W BRAND Vitagen Feeding Fat

Write or telephone for quotations on any quantity you need!

WILSON & CO., INC.

CHICAGO • CEDAR RAPIDS • KANSAS CITY • OKLAHOMA CITY
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The Only Roller Mill That Does Everything

PEERLESS ALL-PURPOSE ROLLER MILL

CRIMPS-CRACKS SMALL GRAIN without dusting
GRANULATES EAR CORN without dusting

The Peerless "All-Purpose" Commercial Roller Mill answers the growing demand for a mill that will crimp-crack all small grains, as well as ear corn. More and more livestock and poultry men are demanding coarser, dust-free feed because it's more palatable, more digestible, less wasteful and improves feeding results 10% to 20%.

Write today for complete information about Peerless Commercial Roller Mills

PEERLESS EQUIP. CO., INC. Dept. 405, Joplin, Mo.

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feed with the new, lower-cost source of methionine...

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METHIONINE HYDROXY ANALOGUE CALCIUM 90%

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Arkansas Reports Time Requirements For Dairy Feeding

FAYETTEVILLE, ARK. — Dairy cows eat grain faster in milking parlors than in stanchion barns. That is the conclusion from a study conducted here at the University of Arkansas Agricultural Experiment Station.

Concentrate consumption rates were observed on more than 400 dairy cattle representing Guernsey, Holstein and Jersey breeds. A summary of the study is presented in Bulletin 609, available from the station.

Guernseys were the most rapid eaters in stanchion barns and Holsteins were fastest in milking parlors, reported Dr. O. T. Stallcup, dairyman. D. V. Bostain, now Van Buren county agent, and K. P. Bierworth, graduate student, worked with Dr. Stallcup.

Guernseys required 2.15 minutes to consume 1 lb. of concentrates in stanchion barns, followed by Holsteins with 2.19 minutes, and Jerseys with three minutes per pound. In milking parlors, Holstein cows took only 1.53 minutes to eat 1 lb. of concentrate while Guernsey and Jersey cows required 1.77 and 1.89 minutes, respectively.

There was considerable variation in the total time the cows required to consume concentrates and in the concentrate consumption rate of all breeds in both stanchion and milking-parlor-type barns, Dr. Stallcup added.

The study indicated that farm management has considerable influence on amount of concentrate fed, time cows require to eat concentrates and their consumption rate.

There were indications that cows eat concentrates more slowly when they are on good pasture than when fed in a drylot, the report said.

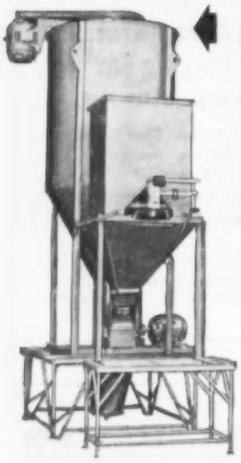
In a study involving 54 cows of Brown Swiss, Guernsey, Holstein, and Jersey breeds, Dr. Stallcup found that the cows required an average of 124 minutes to get a fill of silage. They ate an average of 35.9 lb. at the consumption rate of 3.45 minutes per pound of silage.

Application of these data to milking parlor design and the need for individual attention in the feeding of cows regardless of type of barn used for milking are discussed in Bulletin 609, "Time Required for Dairy Cows To Eat Concentrates and Silage." Copies are available from the Bulletin Room, Agricultural Experiment Station, University of Arkansas, Fayetteville.

Supports Local Eggs

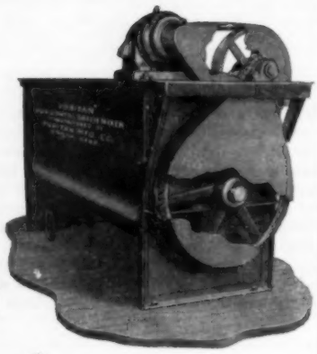
ALBANY, N.Y.—New York's state institutions will buy their eggs exclusively from New York poultrymen from now on, it has been announced. In an effort to bolster the sagging New York egg market, the state will buy 3.7 million home-produced eggs in June.

JAY BEE PERFORMANCE — PROVED FEED PROCESSING MACHINERY



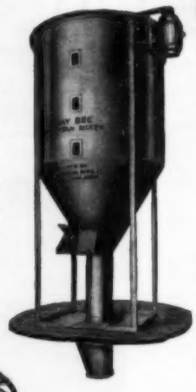
JAY BEE "Pig and Poultry" Feed Unit

Make your own formula feed the way you want it—when you want it—as much as you want. 7½ H.P. hammermill, weight hopper and scales, vertical mixer in 3 sizes—1 ton, with 5 H.P. motor; 1½ ton, with 7½ H.P. motor; 2 ton, with 10 H.P. motor. One-man operation—requires only 6'x10' space—capacity up to 22 tons per day.



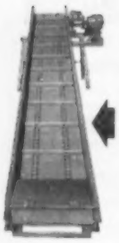
JAY BEE "Puritan" VERTICAL FEED MIXER

For consistently high-quality, high-volume production. From ½ to 3-ton capacity, 3 to 15 H.P.; overall diameter 48" to 72", above-floor height 108" to 168".



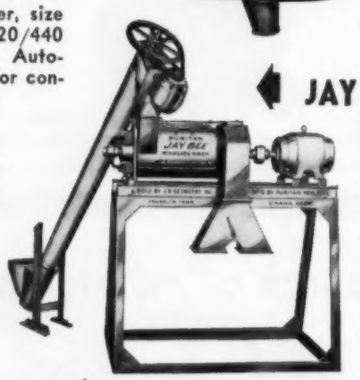
JAY BEE "Puritan" HORIZONTAL FEED MIXER

A heavy-duty unit built for years of dependable service. From ½ to 2-ton capacity, 10 to 40 H.P. Molasses mixing equipment and floor level concentrate conveyor optional on all models.



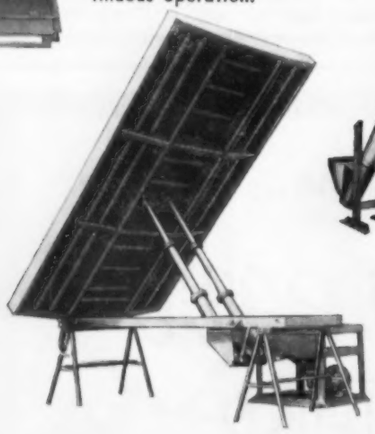
JAY BEE Drag Feeder

A sturdy, efficient feeder, size 14'x20", with 1½ H.P. 220/440 volt, 1800 RPM motor. Automatic trip relay switch for continuous operation.



JAY BEE "Puritan" No. 4 Molasses Mixer

Puts molasses into the feed instead of feed into the molasses—mixes perfectly under all conditions. Capacity 6,000 to 12,500 lbs. per hour—10 H.P. mixer, 3 H.P. pump, 1½ H.P. feeder screw.



JAY BEE HYDRAULIC TRUCK HOIST

Makes bulk unloading simple, safe, efficient, economical—handles pick-ups and long wheelbase trucks—dual cylinders for extra power—maximum lift to 45 degrees. When not in operation, platform is flush with ground level, becomes usable working space.

For complete information about the entire Jay Bee line, see your Sedberry distributor or write

J.B. SEDBERRY, Inc.

TYLER, TEXAS • FRANKLIN, TENN.

William Drane Raymond Bloomer

Ripco Announces Two Appointments

OXFORD, PA.—Ripco, Inc., Oxford, has announced that William L. Drane of Columbus, Miss., has joined the company to handle the full line of Ripco air systems, and that Raymond Bloomer has joined the company as representative in Florida.

R. K. Bennethum, Ripco president, said that with the addition of Mr. Bloomer to the staff, Ripco pneumatic bulk feed handling equipment is now available through direct representation from Maine to Florida, and as far west as Mississippi. Mr. Bloomer was formerly with the Keystone Camera Co.

Mr. Drane is a graduate of Mississippi State College, and since graduation has been continuously connected with feed and feed milling, specializing in mobile milling businesses.

Illinois Grain Dealers Reelect All Officers

SPRINGFIELD, ILL.—All officers and directors were reelected recently by the Illinois Grain Dealers Assn. during its annual convention.

Officers are: L. B. McCarthy, Minonk, president; Homer G. Sturm, El Paso, first vice president; Dale Tammen, Lahogue, second vice president, and E. S. Herron, Gilman, secretary-treasurer.

Reelected directors are: Joe Edmunds, Lomax; H. O. Homan, Atamont; Harold E. Morgan, Clifton; W. J. Mosimann, Mackinaw, and Willis H. Wells, Monmouth.

More than 300 association members attended the convention.

Joins University Staff

UNIVERSITY PARK, PA. — Dr. James M. Murphy has been appointed research professor of veterinary medicine at the University of Pennsylvania School of Veterinary Medicine, it has been announced by Dr. Mark W. Allam, dean of the school. Dr. Murphy, formerly of the New York State College of Veterinary Medicine, is recognized as an outstanding clinical investigator of bovine mastitis.

Recommend 'Self-Help'

SACRAMENTO, CAL.—The California Board of Agriculture has recommended in a recent letter to the House Committee on Agriculture that a self-help program will be the most effective in solving the problems of the nation's poultry producers. As a short range remedy, members supported the use of emergency action by Congress to remove poultry surpluses from normal trade channels.

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of Feed Ingredients

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WAbash 2-7322 TWX 623 Chicago 4, Ill.

The Ruser brothers own and operate a commercial feedlot capable of handling 40,000 cattle a year. They have fed Stilbosol to steers and heifers since it became available late in 1954.

The Rusers use this big "stock market type" blackboard to keep track of rations being fed, length of feed, and lot weights. Tight record keeping like this has shown the Ruser brothers how consistent Stilbosol has been in helping boost gains and cut feed costs.

4 years of higher gains keep this commercial feeder using Stilbosol

"Since we made our first conclusive test with Stilbosol, we have fed it to almost 100,000 steers and heifers," says Bob Ruser.

by Eugene S. Hahnel

"We have been getting an average daily gain of about 2.75 pounds in our lots during the past three years," young Bob Ruser told us during a recent return visit. "We got about 2.50 pounds daily gain in the days before Stilbosol. As you can imagine from these figures, we count heavily on Stilbosol as a regular part of our cattle feeding business."

Records were the deciding factor

Back in 1955, Bob Ruser and his brother, Dale, conducted a 140-day comparison test to check Stilbosol benefits. In their usual careful way, they separated two equal lots of 28 head each. The lot that received Stilbosol supplement in its ration averaged ⅓ pound more daily gain than the control lot (no Stilbosol, but otherwise the same ration).

The ration which contained supplement with Stilbosol also lowered cost of gain by 2 cents a pound.

"That sold us," the Rusers agreed. "Extra gains and lower costs mean at least $5 a head to us."

"Today," Bob admits, "it would be difficult to feed cattle profitably without using Stilbosol!"

*Recent summary of 20 college tests supports feedlot results**

STILBOSOL

Gain stimulation.....18%	Cost/steer/150 days.....$0.63
Feed savings.....12%	Return/steer/150 days..$10.04
Cost/ton supplement.....$4.28-$8.40	Return/dollar cost.....$15.93

**As reported at Iowa State College Cattle Feeders Day, March, 1959.*

Lilly **SALES TIPS FROM GRASS-ROOT SOURCES**

RUSER BROS., VENICE, NEBRASKA

Based on the facts and figures revealed by the Ruser brothers, supplements with Stilbosol . . .

1. **Increased their return per steer or heifer by at least $5.00 since Stilbosol supplements became available.**
2. **Consistently produced ¼ lb. extra daily gains (average) over a period of four years.**
3. **Convinced these veteran commercial feeders that Stilbosol in supplements is extremely important to profits in the cattle feeding business.**

Stilbosol®
(diethylstilbestrol premix, Lilly)
Lilly

Stilbosol is Eli Lilly and Company's trademark for diethylstilbestrol premix which is manufactured and sold under exclusive license granted by Iowa State College Research Foundation, Inc., under its U.S. Patent No. 2751303.

Makers of HYGROMIX® (*S. hygroscopicus* fermentation products, Lilly) • Procaine-Penicillin-G • Vitamin B_{12} • **Micro-Pen™** (special coated procaine penicillin G, Lilly)

ELI LILLY AND COMPANY • AGRICULTURAL AND INDUSTRIAL PRODUCTS DIVISION • INDIANAPOLIS 6, INDIANA

The most complete line of DOG FOOD ingredients

from ONE source

BOXER BRAND

44% SOY CAKE-LETS
expeller, pea-size
CORN KIB-LETS
expanded . . . kibbled
CORN FLAKES
cooked . . . toasted
WHEAT KIB-LETS
expanded . . . kibbled
WHEAT FLAKES
cooked . . . toasted
EXPELLER SOY BEAN MEAL
and other ingredient specialties

Nowhere else can you secure such a major part of your dog food ingredients. By combining your ingredient purchases in cars, mixed cars or LCL you are assured of freshness, and better inventory control with lower inventory investment. BOXER ingredients are manufactured by us specially for dogs—they are "prime" products, and not "by-products." Write for current prices and literature.

RALPH WELLS & CO.
MONMOUTH, ILLINOIS
QUALITY DOG FOOD INGREDIENTS

SERVE MORE CUSTOMERS *Faster*

WITH THIS NEW LIGHT WEIGHT SIMONSEN HIGH DELIVERY BULK & SACK FEED BODY

You'll be way out in front with this attractive new Simonsen High Delivery Combination Body on your truck. It's all steel, light weight — hauls more payload. Hauls bulk and sacks on the same trip — cuts delivery costs. Completely hydraulic, with fast front end delivery at 600 lbs. per minute and reaches 21 feet up. Order the size and compartment arrangement you need. Write now for full details on this custom built body by the number one name in bulk feed delivery equipment.

S

SIMONSEN MANUFACTURING CO.
Dept. FS QUIMBY, IOWA

Use FEEDSTUFFS Want Ads for RESULTS

UP OR DOWN

By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

Seasonal Changes In Hog Prices

Have you ever noticed the high degree of regularity with which prices of some farm commodities have gone up and down during a given season? Hog prices display a stronger seasonal trend than do most other farm products. Knowledge of this seasonal tendency should be a part of the kit of tools of every feed dealer who is interested in his customers making the most profit from hogs.

In order to show the regularity of these ups and downs we have summarized several thousand computations in Exhibit 1. In Exhibit 1 you will find the percent of times prices have gone up from a given month to the following 12 months from 1947 to 1958. At first glance this table may appear complicated, but once you have followed through an example of how to use it, you will find it contains useful information regarding the seasonal movement of hog prices.

Here's how to read Exhibit 1. In the first column is given the base month. For example, take the month of January on the first line. Now read over directly under the column headed February and you will find a 67. This means that 67 percent of the years prices went up from January to February since 1947. Reading further over the same line you will find a 75 under the column headed March. This means that three out of four years prices have gone up from January to March.

Now look at the most extreme example on the page, read down until you are on the line headed September in the base month column. Now read over until you are under the column for November. You will find a zero. This means that not once during any of the years from 1947-1958 did U.S. farm price of hogs go up from the middle of September to the middle of November.

If prices do not go up, they, of course, either stay the same or go down. You will find in Exhibit 2 the percent of times prices went down from the base month to following months. The number of times prices remained the same from one month to the next is shown in Exhibit 3. Both Exhibits 2 and 3 are read in the same way you read Exhibit 1.

Prices used in these comparisons are U.S. average farm prices as reported by the Crop-Livestock Reporting Service. They are computed as of the middle of the month. There may be some slight variation from one part of the country to another. In general, however, the prices used give a representative picture of seasonal changes.

A. E. Staley Publishes 'Grass Silage Manual'

DECATUR, ILL.—A "Grass Silage Manual" has been published by the A. E. Staley Manufacturiing Co., Decatur.

The booklet is written to serve as a guide for making better grass silage, and to increase its feeding value for beef, dairy cattle and sheep. Copies are available by writing: Formula Feed Department, A. E. Staley Manufacturing Co., Decatur, Ill.

Other recently published booklets include: "Turkey Growing Program," "Broiler Growing Program," and "Meat Hog Program."

NEPPCO Begins Sale Of Exhibit Space

TRENTON, N.J. — The Northeastern Poultry Producers Council (NEPPCO) has launched the sale of exhibit space at its annual exposition with the theme, "Sales Round-up Time."

The exposition and annual convention will be held in the Farm Show Building in Harrisburg, Pa., Oct. 6-8. This will be the third consecutive year that the exposition has been in Harrisburg.

Copies of the exhibit floor plan and details on a NEPPCO attendance survey are available from NEPPCO, 10 Rutgers Place, Trenton 8, N.J.

EXHIBIT 1. Hogs: U.S. Farm Price, Percent of Times Price Went Up from Base Month to Subsequent Month, 1947-1958.

Base month	Subsequent month: Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January	67	75	75	67	67	67	75	83	50	33	42	55											
February		42	42	58	67	67	67	67	58	42	42	45	36										
March			42	58	67	67	67	75	58	33	33	55	45	45									
April				42	83	67	75	67	58	33	50	55	45	45	45								
May					58	58	75	58	33	17	33	45	45	55	45	55							
June						42	67	50	25	8	25	55	45	55	55	55	55						
July							75	42	17	8	17	27	35	45	36	36	36	45					
August								33	8	8	8	27	27	27	27	36	27	45	55				
September									17	0	8	18	45	36	36	36	27	36	64	45			
October										8	25	36	45	45	45	64	64	55	55	73	55		
November											33	55	55	64	64	73	73	82	82	73	73	55	
December												73	64	64	64	73	73	64	73	73	64	55	36

EXHIBIT 2. Hogs: U.S. Farm Price, Percent of Times Price Went Down from Base Month to Subsequent Month, 1947-1958.

Base month	Subsequent month: Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January	33	25	25	25	33	33	25	17	42	67	58	45											
February		58	58	42	33	33	33	33	42	42	58	55	64										
March			58	42	33	33	33	25	42	58	67	45	55	55									
April				50	17	33	25	33	42	67	50	45	55	55	55								
May					42	33	25	42	67	83	67	55	55	45	55	45							
June						58	25	42	75	92	75	45	55	45	45	45	45						
July							25	58	83	92	83	73	64	55	64	64	55	55					
August								58	92	92	83	73	73	73	64	64	64	55	45				
September									83	100	92	82	55	64	64	64	64	64	36	55			
October										92	75	64	55	55	55	36	36	45	45	27	45		
November											58	45	45	36	36	27	27	18	18	27	27	45	
December												27	36	36	36	27	27	27	27	27	36	45	64

EXHIBIT 3. Hogs: U.S. Farm Price, Percent of Times Price in Base Month Was the Same as in Subsequent Month, 1947-1958.

Base month	Subsequent month: Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January	0	0	0	8	0	0	0	0	8	0	0	0											
February		0	0	0	0	0	0	0	0	17	0	0	0										
March			0	0	0	0	0	0	0	8	0	0	0	0									
April				8	0	0	0	0	0	0	0	0	0	0	0								
May					0	8	0	0	0	0	0	0	0	0	0	0							
June						0	8	8	0	0	0	0	0	0	0	0	0						
July							0	0	0	0	0	0	0	0	0	0	9	0					
August								8	0	0	8	0	0	0	0	9	0	9	0				
September									0	0	0	0	0	0	0	0	0	9	0	0	9		
October										0	0	0	0	0	0	0	0	0	0	0	0		
November											8	0	0	0	0	0	0	0	0	0	0	0	
December												0	0	0	0	0	0	9	0	0	0	0	0

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Dealers Get Suggestions on Milling Operations at Seminar Sponsored by Feed Manufacturer

By ROGER BERGLUND
Feedstuffs Managing Editor

There are some real opportunities these days for feed retailers, particularly in grain areas, who can render efficient milling services for their livestock and poultry feeders. Both mobile and stationary mill services are in the picture, and fitting in with the over-all service pattern are grain banking and bulk feed handling.

Such services, of course, are part of the trend toward greater use of complete feeds and also the trend toward getting milling service closer to the customer. An increase in pelleting in local mills also is forecast by some feed men.

A feed manufacturing company which has been devoting increased attention to working with dealers in providing milling and other services for their customers is Kent Feeds, Inc., of Muscatine, Iowa. The company has plants at Muscatine and Sioux City, Iowa, and its principal area includes Iowa and parts of Illinois and Nebraska.

For some time, the firm's production department, under C. E. (Bud) Swick, has offered engineering help to dealers on their mill set-ups. More recently, the company held a special seminar in Muscatine on grinding and mixing, bulk feed handling, portable mills, grain banks and financing of mill building and expansion.

Some 300 dealers and other guests were on hand for the day-long seminar at the National Guard Armory. In addition to panel discussions by Kent dealers, the event included exhibits of milling and bulk storage and delivery equipment by several equipment firms.

Moderating the panel discussions were Kent Feeds executives.

Roy Luce, sales training director, was in charge of the seminar.

At the outset it was pointed out that the seminar was not being held "to try to tell you what to do." Rather, it was explained, the idea was to bring together dealers who have had considerable experience in various phases of mill operations and bulk handling, plus equipment manufacturers, to answer feed men's questions.

The dealers on the panels showed slides of their operations, described their facilities and answered questions from the moderators and the audience on just how they make things tick.

It was apparent that many of these dealers are doing business in very substantial volumes.

All of the panel discussions brought out answers to specific questions on portable and stationary milling, grain banking and bulk handling.

The first panel session covered portable milling and is reviewed below. The other discussions will be reviewed in subsequent articles in Feedstuffs.

The portable milling panel was moderated by W. J. Wilson, district sales manager for Kent. Panel members were Joe Gamble, Gamble Feed & Produce, Mechanicsville, Iowa; Paul Leonard, Leonard's Hatchery, Osage, Iowa; and Roman Welter, Hopkinton (Iowa) Cooperative Creamery Assn.

Mr. Welter has two Daffin units, with mixer size of 75 bu.; Mr. Gamble, a Barnard & Leas mill, with a 2-ton mixer; Mr. Leonard a Mooer's portable with a 2½-ton mixer. All reported that they have molasses

Gage Kent (left), president and founder of Kent Feeds, is welcoming Kenneth Fairall, head of the Small Business Administration office in Des Moines, to the milling seminar for dealers. Mr. Fairall explained financing and other services provided by SBA for feed mill operators.

mixers, and all three men indicated that this has been especially beneficial in their businesses. For example, Mr. Leonard reported mixing a lot of cracked corn and molasses for beef feeders.

In all cases, livestock and dairy feeds accounted for most of the portable mill business, with poultry feed representing a minor share of the grinding and mixing activity.

Paying Operators

Asked how they pay their operators, the dealers replied as follows:

Gamble: The driver is paid a straight salary and receives extra rewards for holding down on breakdowns through good maintenance. He also gets a bonus at the end of the year based on the business.

Welter: One operator receives a base salary, plus certain percentages of the gross and net profits. The operator's helper is paid a flat wage. The second operator receives a base salary plus a percentage of the gross.

Leonard: The operator is paid on salary plus commission basis.

The dealers reported that except during some severe weather for a few days this past March, they have never lost operating time because of the weather or bad roads. One dealer pointed out that portables can operate about any place an ordinary delivery truck can go.

All three dealers indicated that they do not charge anything extra for grinding and mixing services if the farmer supplies his own concentrates. Asked what regular charges are, Mr. Welter said $5.50 per batch for fine grind; $4.50 for coarse; with a 50¢ discount for more than one batch at a time. Mr. Gamble charges $6.50 for the first two tons; $6 for the next two tons; and $5.50 for the next two. Straight shelling is $5.50 per ton.

None of the dealers has a salesman working ahead of the mill lining up jobs. All indicated that they now have as much or more business than they can handle under their present set-ups.

Describing his individual operation, Mr. Gamble said that he "gets a lot done with one unit." He noted that his unit "gives a good mix"; has a screw intake auger and screw discharge; unloads a 2-ton mix in four or five minutes; and has a place to carry 1 to 1½ tons of supplement, mineral and salt.

Obtained New Customers

He commented that he obtained a considerable number of new customers after adding the mobile mill to his operation, and he said that the accounts receivable situation has been "very good" with the mobile business. The mill has handled as many as 25 or 26 batches per day.

Mr. Leonard said that his feed business has increased and now equals the firm's hatchery sales volume. Explaining his mobile mill operation, he pointed out that the mill, while rated at 2½ tons, can handle a 3-ton mix.

The molasses end of the operation is important, Mr. Leonard pointed out, with the markup on this commodity helping to increase profits.

His unit has screw unloading and loading and unloads in seven minutes.

Discussing expenses, Mr. Welter said that truck expense is the biggest operating expense in his mobile business.

He mentioned that his second unit has a pneumatic unloader. This is handier for a one-man operation, he said, but there are some maintenance problems. "When the air system is operating right," he said, "the unit can be unloaded in four or five minutes."

Route Systems

Mr. Welter said that he uses a semi-route system, with one mill operating on each side of town. Each customer is serviced one or two days a week; each customer has a certain day or days for grinding, and this schedule is usually followed.

"I don't believe a formal route system is compatible with good service," Mr. Gamble said. "We try to stay in sections each half day. For example, we will spend a half day in the southwest area and the other half in the northeast. We will call on a customer if we are going by to see whether he needs service."

Mr. Leonard said he had set up a route system, with the mill to cover one of four areas on each of four days, with extra business to be handled the other two days of a six-day week. This has helped in scheduling, he indicated, but with one mill, it is hard to follow. Many farmers just won't plan far enough ahead.

Asked whether they have a delivery truck working ahead of the mill, the dealers replied as follows:

Welter: "We don't use a delivery truck ahead of the mill. Customers are supplied ahead of time by the usual means."

Gamble: "On occasion, we will send a truck out with concentrates ahead of the mill. The mill itself is equipped with space to haul 1 ton of feed."

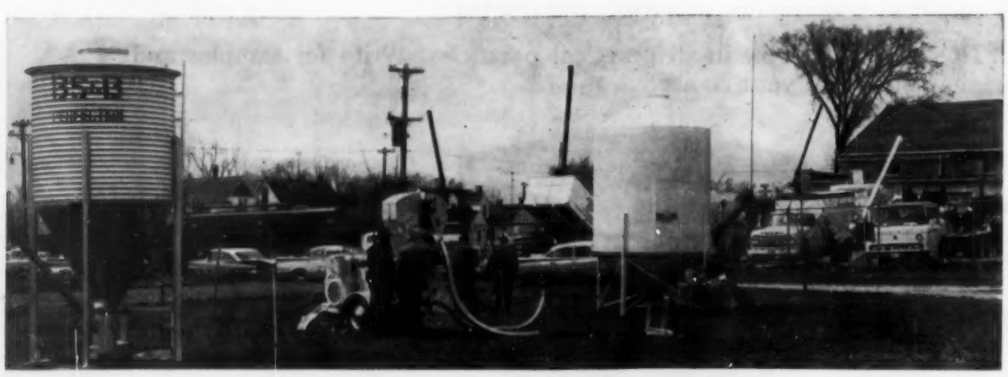
Leonard: "Yes, but it delivers very little of the feed. Actually, the mill itself can deliver small lots of feed."

Mr. Gamble said that he makes some profit on the milling business itself. But, he said, that is just part of the business. The service, he said, has resulted in new customers and extra sales of feed and equipment such as farrowing stalls.

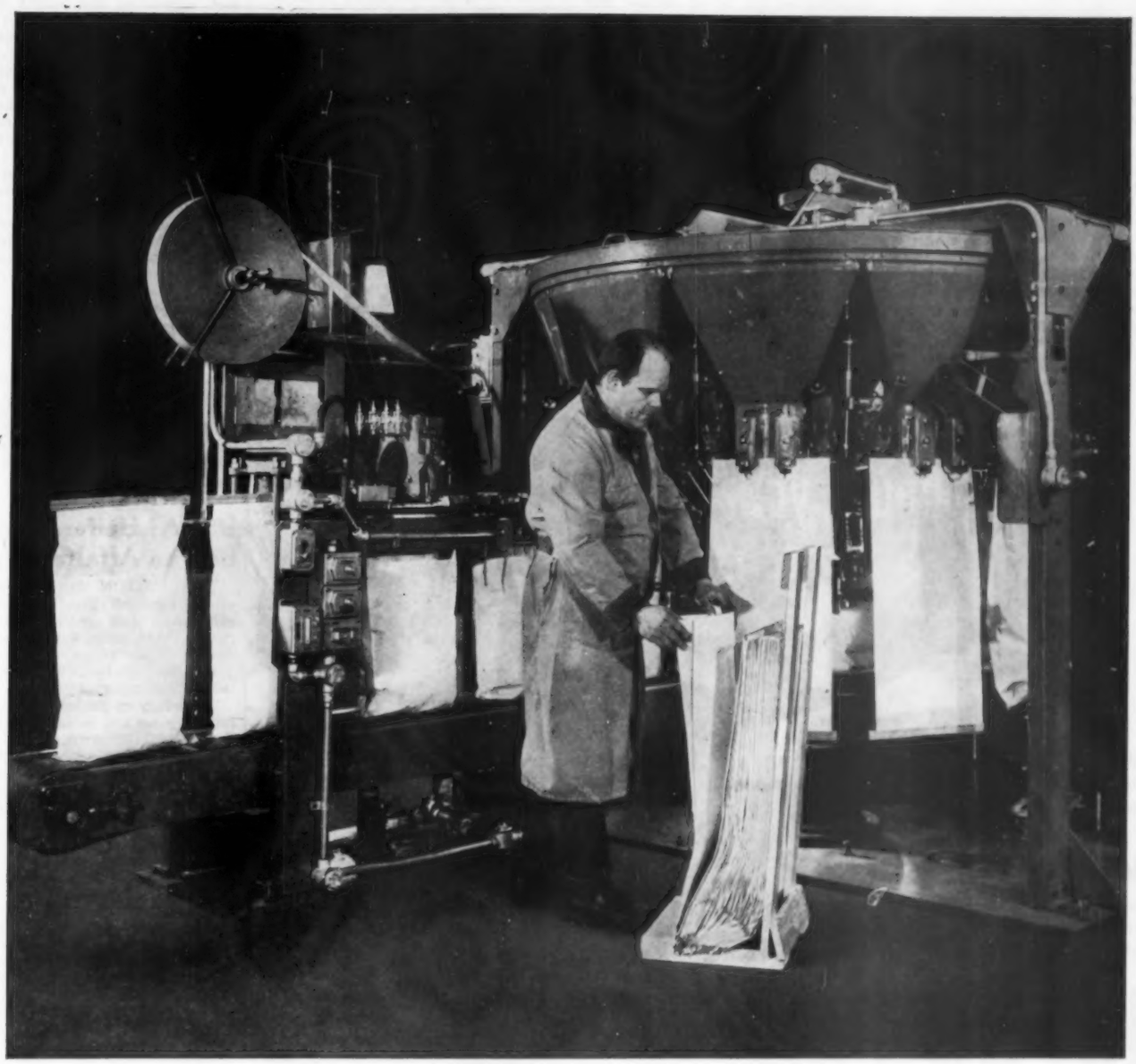
The dealers were asked how many jobs are needed per day to make the mobile operation profitable, Mr. Gamble said that an average of 15 batches a day, or 30 tons, is "pretty profitable." The mill revenue doesn't have to be $100 a day to be profitable, he said.

In general, all three dealers felt that their mobile units have provided valuable services for their customers, have been profitable in themselves and have helped expand sales of feeds and other items.

Pictured here are members of the portable mill panel. Left to right are W. J. Wilson, Kent Feeds district manager, the moderator; and dealers Joe Gamble, Mechanicsville, Iowa; Paul Leonard, Osage, Iowa, and Roman Welter, Hopkinton, Iowa. The dealers explained their respective operations and answered questions posed by many of the men in the audience of 300 persons.



This is a partial view of the bulk handling, portable mill and other equipment on display at the Kent Feeds seminar at the National Guard Armory in Muscatine, Iowa. Equipment manufacturers were present for the event to answer dealers' questions on mill and bulk facilities. Equipment was displayed on the grounds surrounding the armory, and machinery representatives also had space in the armory to consult with dealers after the seminar.



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Wafers, Baled Hay, Pellets Compared In Illinois Tests

URBANA, ILL.—Hay wafers produced better gains than baled hay when fed to heifer calves at the University of Illinois Dixon Springs Experiment Station, but pelleted hay produced even higher average daily gains than the wafers.

The wafers were 4 in. in diameter and about 1 in. thick, and consisted of field-cured mixed clover and grass hay. According to Prof. H. A. Cate of the Dixon Springs station, the heifers had no difficulty in chewing the wafers.

"Heifer gains on the wafered hay—no other feed was fed—were not exceptional, but satisfactory. In a winter test, the wafered hay produced daily gains of about three fourths of a pound a day while baled hay produced about one third of a pound daily gain," Prof. Cate reported. "Both wafers and baled hay were fed at the rate of slightly more than 11 lb. a day to each calf. Eleven pounds was the amount put into the bunks, but observation led us to believe that waste was less for the wafered hay, meaning that the amount of hay that reached the paunch of the calves as wafers was probably greater. We have no way of measuring exact consumption, but the observation of less waste plus the higher gains led us to believe that wafer consumption was better."

Prof. Cate commented that pelleted hay produced average daily gains of about 1.5 lb., with the average daily consumption up to more than 16 lb. "It took only 1,100 lb. of pelleted hay to make 100 lb. of calf gain. About 1,600 lb. of wafers were needed to give the same gain while calves on the baled hay needed about 3,600 lb. of hay for each 100 lb. of gain," he said.

Way to Ease Cage Fatigue Suggested

COLLEGE PARK, MD.—Relief for birds suffering from caged layer fatigue can be gained by putting a shingle or thin, flat board on the wire floor, according to G. D. Quigley, poultry husbandry at the University of Maryland.

Reporting in "Information for the Maryland Poultryman," a publication of the Maryland Extension Department, Mr. Quigley said it appears that the cause of the condition is management and not nutrition.

He described cage layer fatigue as a condition occurring in layers which have been in production for some time. The bird is unable to stand, and it hobbles as if in great pain. It does not eat and goes out of production. The trouble strikes from a few to 5% or more of the birds.

"If a typically fatigued bird is dropped into a floor pen with litter," Mr. Quigley said, "she may recover within a few hours, and on the same feed."

He said nature intended that the bird rest upon the whole foot, with the ball of the foot, as well as the toes, supporting the weight of the bird. In a typical cage, however, much of the time the toes are not used at all, he pointed out. Instead of the bird's weight being distributed over the entire ball of the foot, the weight rests on a thin narrow line—the wire of the cage floor. The feet and legs are subjected to strains which finally overcome the birds, he said.

At the University of Maryland, "excellent results were secured by fastening a plastic pad on the floor of the cage of an affected bird. This pad, one fourth of an inch thick, is flexible but relatively firm. Recovery occurs within a week with no change in diet," Mr. Quigley said.

Excellent field results have also been reported from using a wooden shingle or flat, thin board floor that gets the chicken off the wire. When the bird recovers, the board or shingle may be removed.

"Whether redesign of cage floors is practical remains to be seen," Mr. Quigley said, "but it looks as though prevention may have to come from that direction."

USDA: Heifers Grow Best on Alfalfa Hay

WASHINGTON—Dairy heifers fed alfalfa hay will gain more weight, gain faster and consume more dry matter than heifers fed unsupplemented alfalfa silage or corn-alfalfa silage, the U.S. Department of Agriculture has reported.

In a study of dietary requirements for dairy heifers, heifers at USDA's Agricultural Research Center, Beltsville, Md., were raised successfully to calving at two years of age on 370 lb. of whole milk, 400-500 lb. of grain and all the good alfalfa hay they wanted.

Substituting silage for hay caused lower feed consumption, lower rate of gain, lower weight at calving and slightly lower milk and butterfat production during first lactation.

Production and body weight equalized as the cows became older, USDA said. Production was the same during the second lactation for animals reared on silage and those reared on hay. Body weight was equalized by the fifth, sixth or seventh year of age.

Supplementing the silage with a pound of hay daily for every 100 lb. of animal weight or with 2 lb. of grain daily produced heifers only slightly smaller than those on hay alone.

USDA scientists who made the study believe that calves will grow normally if they get at least 4 lb. of grain daily in addition to all the hay-crop silage they want. In these tests, the wilted-alfalfa silage contained 30% dry matter. Silage with a higher moisture content would not give as good results, USDA said.

GRAIN PROCESSING FIRM

LITTLE ROCK, ARK.—Waldenburg (Ark.) Processing Co., Inc., has filed articles of incorporation with C. G. Hall, Arkansas secretary of state, to engage in "rice, oats, wheat, soybean and other types of grain processing." The company was authorized 1,000 shares of $100 stock. It said it had $9,000 paid-in capital. Incorporators were Jack W. Kanapple and Otto C. Scholze, both of Waldenburg, and Donald R. Gunter, Fisher.

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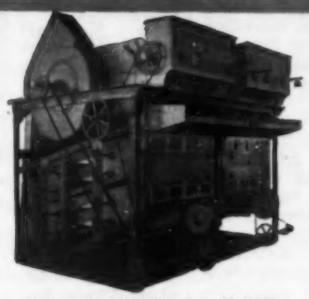

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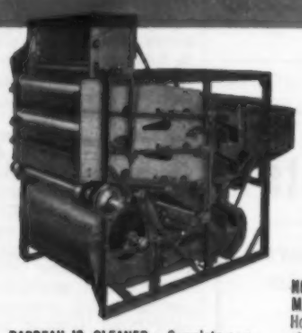

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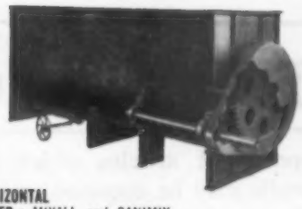

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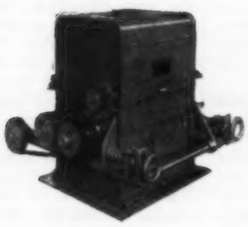

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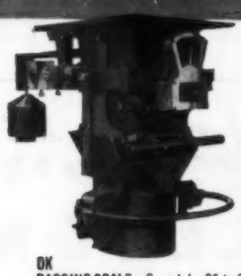

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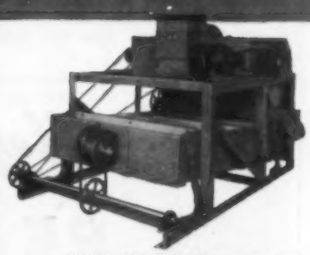

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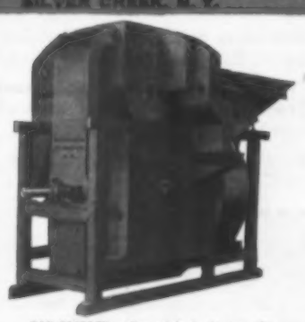

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Study Shows Steers Can Do Well on Poultry By-Products

FAYETTEVILLE, ARK. — Beef steers on test utilized poultry slaughter by-products for protein supplement as satisfactorily as other steers utilized cottonseed meal in terms of weight gain, digestibility, feed efficiency and carcass grade, according to findings of Dr. Maurice Ray, associate animal husbandman, University of Arkansas Agricultural Experiment Station.

Sixteen steers averaging 642 lb. were used in the 104-day trial. They were divided into four groups and fed nine parts corn and one part protein supplement. Each lot received a different protein supplement. The four supplements were feather meal; blood and bone meal; cottonseed meal, and a combination meal consisting of 50% cottonseed meal, 25% hydrolyzed feather meal and 25% blood and bone meal.

Animals receiving the blood and bone meal supplement had a higher daily gain of 2.20 lb. and consumed less feed per pound of gain (7.46 lb.) than did animals on the other three rations, Dr. Ray reported in Arkansas Farm Research magazine.

Digestion coefficients indicate that animals receiving the three rations containing poultry slaughter by-products digested their rations as thoroughly and in some cases more thoroughly than did animals on the ration containing cottonseed meal.

One steer from each group was slaughtered. Carcass grades ranged from low good to low choice. The steer fed poultry blood and bone meal graded highest. The one fed feather meal graded lowest. Color differences in the meat of slaughtered animals were too small to be significant, Dr. Ray stated.

Meat Consumption

WINNIPEG—Canadians consumed an estimated average of 138.1 lb. of meat per person in 1958. This was 4 lb. less than in 1957 and 1956, but nearly 5 lb. more than the 1946-50 average of 133.3 lb.

W. P. McDonald Gets New A. E. Staley Post

DECATUR, ILL.—Appointment of W. P. McDonald as director of special accounts in the formula feed department of the A. E. Staley Manufacturing Co., Decatur, has been announced.

W. P. McDonald

Mr. McDonald will be in charge of Rockland Diet Feeds, dog food, turkey, broiler and house accounts in his new responsibilities. Special integrated operations also will be under his jurisdiction.

Mr. McDonald left the Moorman Manufacturing Co. in June, 1957, to join Staley as district sales manager of the Illinois feed sales division.

California Cooperative Announces Refunds

LOS ANGELES—The Poultrymens Cooperative Association of Southern California announces that it is making cash distribution of $420,378 to its poultrymen-members in southern California. Association officials said the sum constitutes the major part of the margins earned by the cooperative in its feed, supply and egg marketing operations during its fiscal year which ended March 31.

The cash refund being received by PCA members, they said, is figured on the following schedule: $3 ton on formula feeds, $1 ton on grains and scratch feeds, $1.09 ton on other feed items and 2.5% of dollar volume on supply purchases. Additionally, $9,970 is being distributed to PCA egg shippers.

Total member margins earned by the association during the fiscal year 1958-59 amounted to $666,023. Officers said the balance of this sum, after cash distribution of $420,378, will be credited to the members in the association capital structure and will be revolved to them at a later date.

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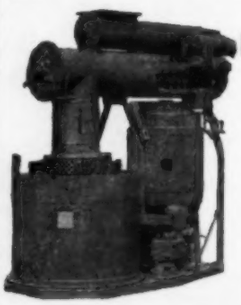

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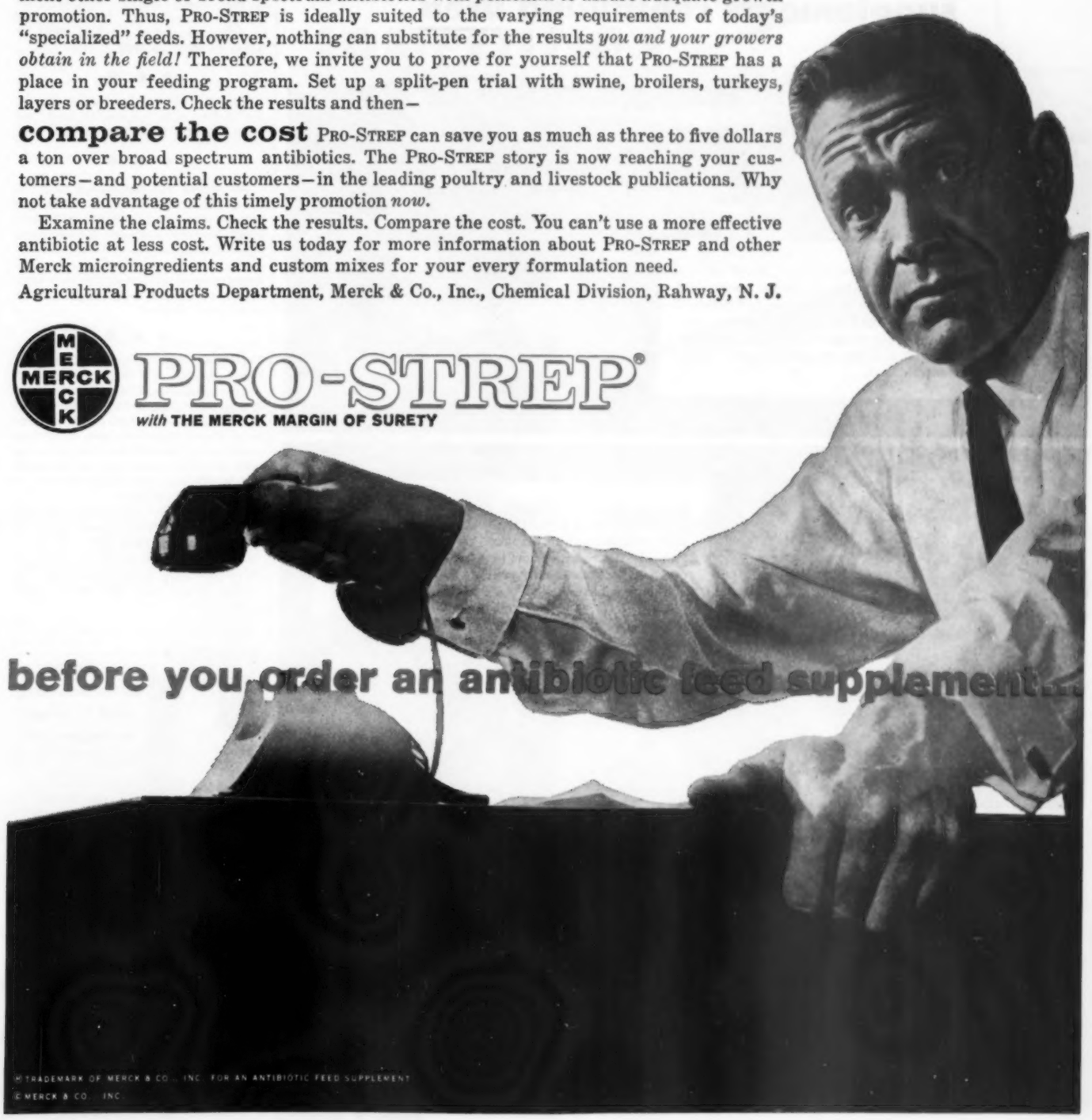

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Expansion in Mid-East Planned by Peterson

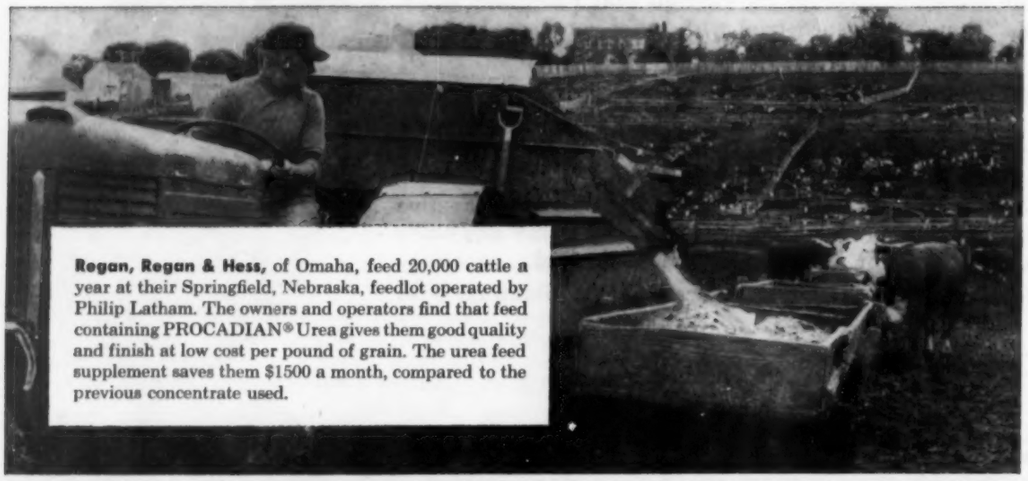
DECATUR, ARK. — Lloyd Peterson, president, Peterson Breeding Farm, Decatur, and Kirk Hale, executive vice president, returned recently from a conference in Milan with European representatives of the firm from France, Italy and Spain. The conference was held to discuss plans for further distribution of the Peterson Male into Middle Eastern countries.

Rear Admiral F. R. L. Tuthill, vice president for international relations and assistant to the president, and Jackie Wilmoth, Peterson sales manager, arrived in Milan a few days prior to the conference.

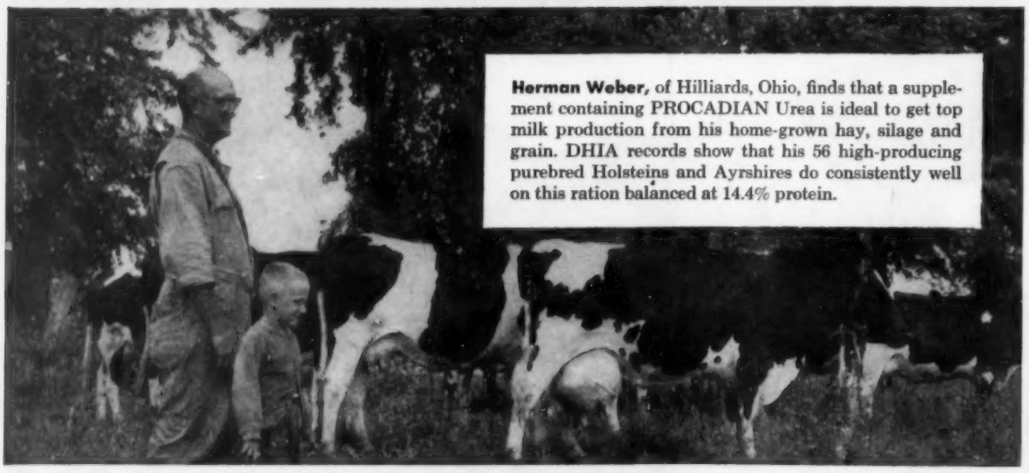
FEED BUSINESS SOLD

ZUMBRO FALLS, MINN. — Keith Hosking and Jerry Johnson, Zumbro Falls, have taken over the feed mill here formerly owned by Arnold Oelkers, mayor of Zumbro Falls.

For maximum profits, these feeders use supplements containing urea



Regan, Regan & Hess, of Omaha, feed 20,000 cattle a year at their Springfield, Nebraska, feedlot operated by Philip Latham. The owners and operators find that feed containing PROCADIAN® Urea gives them good quality and finish at low cost per pound of grain. The urea feed supplement saves them $1500 a month, compared to the previous concentrate used.



Herman Weber, of Hilliards, Ohio, finds that a supplement containing PROCADIAN Urea is ideal to get top milk production from his home-grown hay, silage and grain. DHIA records show that his 56 high-producing purebred Holsteins and Ayrshires do consistently well on this ration balanced at 14.4% protein.

It pays to use **PROCADIAN® UREA** *in your feed*

Thousands of farmers know your high-quality feeds containing PROCADIAN Urea Feed Mixture are excellent for meat and milk production at a profit. This pure, easy-mixing source of protein is so concentrated that you have plenty of room in the bag to supply all the energy, minerals, vitamins and other essentials of a balanced supplement for cattle or sheep. This helps the animals to get top feed value out of their entire ration. It pays to use PROCADIAN Urea in all your ruminant feeds. Order PROCADIAN today.

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Allied Chemical

Two little boys were playing in a train. The conductor said the children must behave or he would make trouble. The boys' father said, "You don't know what trouble is. My wife's in the hospital. I am on my way to see my sick mother-in-law; my daughter has had triplets; one of the boys has just smashed his finger and the other has chewed up our tickets. To top it all off, we are on the wrong train."

◆ ◆ ◆

In a Sunday school class discussion of temperance, one mother related that she learned how well she had taught her children the evil of liquor when her youngest, a TV cowboy fan, brought her a picture he had drawn of a cowboy in a saloon.

"But don't worry, Mother," he quickly assured her, "he isn't going to drink anything. He just went in there to shoot a man."

◆ ◆ ◆

When a bride walks into a church, are these words running through her mind: "Aisle, altar, hymn"?

◆ ◆ ◆

An officer had dictated a letter to the young secretary in which the words "intelligence officer" were used twice. The secretary, not used to army titles, typed "intelligent officer."

The officer who had dictated the letter roared at the little secretary: "Look at this! Whoever heard of an intelligent officer!"

◆ ◆ ◆

In these days of wonder drugs, the common cold still defies medical research. Suffering from a severe cold, the patient begged the doctor to cure it for him quickly. But the doctor had only one suggestion, and a strange one it was. He told the man to go out into a cold winter rain with inadequate clothes and allow himself to be soaked through.

"But, Doctor," exclaimed the puzzled patient. "That would give me pneumonia, wouldn't it?"

"Exactly," answered the doctor. "We can cure pneumonia with penicillin in no time, but for a cold—nothing!"

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I was a 20 lb. weakling until I started on feeds with SUCRO-FLAVOR
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'Old-Line' Factor Firm Announces Expansion Of Financing Services

NEW YORK — An "old-line" factoring firm, with annual purchases of more than $400 million of manufacturers' receivables, has announced the extension of its financing services into the fields of accounts receivable financing and non-notification factoring.

Accounts receivable financing differs from traditional old-line factoring in that it involves a cash advance to clients rather than outright purchase of accounts receivable by the factor.

Walter M. Kelly, president, Commercial Factors Corp., New York, said that "as we expand year after year into fields not allied with the basic textile and apparel group, the need for flexible financing, in addition to factoring, becomes more and more apparent."

Mr. Kelly described the three basic financial systems now offered by Commercial. He said in the case of "old-line" factoring, "Commercial purchases outright the accounts receivable of a client, makes cash immediately available on shipment and relieves the client of all credit and collection problems. Commercial assumes full responsibility for the collectability of the receivables," he added. "Under this system the customers of our clients are notified on the invoices to pay us directly, thus relieving our clients of all the chores associated with accounts receivable handling and bookkeeping."

He termed the second system "non-notification" factoring and pointed out that "here, too, we check the credits and protect our clients against credit losses, but under this system we do not do the accounts receivable bookkeeping work nor do we make direct collections from the customers, and our name does not appear on the invoices."

Mr. Kelly said the third system, accounts receivable financing, "will find its greatest appeal in industries where the notification feature is not a common practice."

Under terms of an accounts receivable financing arrangement, Mr. Kelly said, "Our clients would receive cash upon shipment for the major portion of their receivables, with the balance upon collection." And he continued, "Our clients, under this system, pass on the credit of their own customers, handle collections from them themselves and remain responsible for the payment of the receivables. The customers of our clients are not notified of the assignment of their accounts."

One of Commercial's basic client services is a program of full-time, constructive marketing counsel. Regardless of what financing system the clients select, they are invited to use the facilities of Commercial's research and development department, Mr. Kelly said.

"We now have three services," he said, "all providing, from accounts receivable, a continuing source of supplementary working funds on a revolving basis. The system we finally recommend to a prospect, after a thorough study of his requirements, will be the one best suited to his own particular financial needs.

"We intend to build into our new accounts receivable division the same quality and service features that have helped to make our name the leader in the factoring field," he added.

NEW FEED FIRM

WHITEFISH, MONT.—The Whitefish Feed & Seed Co. has been opened here by Robert Crane. The custom feed mill was purchased by Mr. Crane from Holyk's Feed.

Wirthmore Announces Personnel Changes

WALTHAM, MASS.—A number of personnel reassignments, new appointments and promotions have been announced by Wirthmore Feeds, Inc., Waltham.

Bruce N. Levis, former turkey specialist, has been promoted to assistant sales manager for Wirthmore's Toledo division, reporting to Ralph Dower, head of division sales. Mr. Levis' duties will continue to include turkey as well as poultry supervision work.

S. C. Reed, former assistant division sales manager at Toledo, has been reassigned to the New England East division in a similar capacity, with headquarters in southeastern Massachusetts.

Ray S. Edwards has joined the company as a poultry sales and service man in the New England West division, covering eastern New York and western Vermont. He is a graduate of the University of Maine, majoring in poultry. He will operate from headquarters near Greenwich, N.Y.

Gerald C. Newcombe, formerly a county agent in Connecticut, will be assigned to dairy service work in southern Massachusetts and Rhode Island.

Albert Hall, Wirthmore poultry sales and service man who has been covering southeastern Massachusetts, will transfer his operations to Connecticut.

W. Va. Poultry Meet

MORGANTOWN, W. VA.—W. D. Tuckwiller, Lewisburg, president, West Virginia Poultry Assn., has announced that this year's state poultry convention will be held July 29-31 at Moorefield in Hardy County. The business meeting will be conducted on the afternoon of July 29 and the educational part of the program will be held on the following two days, July 30-31.

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Oklahoma Feeders Hear Reports on Swine, Lamb, Beef Feeding Systems

STILLWATER, OKLA.—A comparison of pasture and confinement systems for raising hogs and a study of early weaning of lambs for more efficient use of wheat pasture were two of the highlights of the recent Livestock Feeders Day held on the Oklahoma State University campus here.

An estimated 2,000 persons turned out for reports by university staff members on these two studies and several more projects involving beef cattle, sheep and swine. Other highlights of the day were talks by Adolph Rupp, University of Kentucky basketball coach and a Hereford breeder, and Dr. L. E. Hawkins, director of the Oklahoma Experiment Station, and the presentation of a portrait of Dr. A. E. Darlow, vice president of Oklahoma State University, to the school.

Following are the reports on feeding studies:

CONFINEMENT VS. PASTURE MANAGEMENT PROGRAM FOR SWINE: Dr. J. A. Whatley reported that sows raising litters on pasture weaned pigs that averaged 4.0 lb. heavier than sows which raised their pigs on concrete floors in confinement.

However, this difference was much less when pigs raised in confinement were given iron-dextran injections for prevention of anemia, he said.

After weaning, confinement-fed pigs gained faster and more efficiently, although they tended to be slightly fatter and to be not as straight and sound on their feet and legs as the pasture-fed pigs.

The best combination system in the experiment was one in which the litters were raised by their dams on pasture from six days age until weaning at 56 days, when the pigs were moved to confinement lots for feeding to a market weight of 210 lb. Pigs on this system averaged 1.62 lb. gain per head daily, with a feed requirement of 3.29 lb. per pound of gain. The poorest system was the opposite of this, in which the pigs were raised in confinement and fattened on pasture. They gained 1.32 lb. per day and required 3.55 lb. of feed per pound of gain.

EARLY WEANING OF LAMBS FOR MORE EFFICIENT USE OF WHEAT PASTURE: Removing ewes from wheat pasture so their lambs will have more grazing may be a very profitable practice for producers of "spring lambs," according to a test reported by Dr. J. V. Whiteman.

The test was conducted during 1958-59 at the Fort Reno Experiment Station. Western ewes and Dorset-western ewes, and their lambs from Hampshire and Suffolk rams, were grazed on wheat pasture starting in late fall.

The lambs were creep-fed free choice with a mixture of two parts cracked milo grain and one part chopped good quality alfalfa hay. One half were weaned at 50 to 60 lb., and the others were left with their dams. The lambs were given an estimated live grade and marketed at 90 to 92 lb.

Lambs from yearling ewes showed little difference due to weaning. Average daily gains, per lamb, were .50 and .52 lb., for weaned and non-weaned, respectively. Lambs from two-year-old ewes likewise showed little difference in daily gain due to weaning.

The estimated grades for all lambs marketed indicated that the lambs not weaned graded about two tenths of a grade higher than those which were weaned.

Dr. Whiteman pointed out that this system of management, if feasible, should have the following advantages:

1. The amount of available wheat pasture for lambs is increased.
2. The ewes do not become too fat after flow of milk decreases.
3. More lambs can be produced if the number of lambs one can raise depends on the amount of wheat pasture available.
4. Ewes, after the lambs are

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(b) to bagger inside feed mill.
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weaned, can be wintered on dry grass and alfalfa hay or protein supplement.

USE OF TRANQUILIZERS IN LIVESTOCK PRODUCTION: Dr. R. L. Henrickson reported wide variations among beef cattle in the degree of tranquilization obtained from a given dose.

When weaning calves were given intramuscular injections of Diquel, only about half of them showed clinical tranquilization, and this lasted less than 48 hours, he said. A dosage of .9 to 1 mg. of Diquel per pound of body weight resulted in greater tranquilization than a dosage of .7 mg. per pound. There was no relationship between the tranquilizer injected and weight gains of calves up to weaning nor in the 21 to 33-day period following weaning, he reported.

Dr. Henrickson also reported that the addition of Compazine to the feed of yearling steers did not improve the rate of gain, feed efficiency or carcass merit of the animals used in the studies.

Examination of meat from test cattle showed small quantities of residual chlorpromazine in the fat, brain, heart, lungs, and kidneys of those which had been injected with the drug. Animals held for 72 hours after injection had no residual compound in any of the tissues. The lean muscle contained no residue regardless of the dose level.

EFFECT OF RATION PREPARATION ON FEEDLOT PERFORMANCE OF SWINE: Dr. J. C. Hillier reported that complete mixed rations produced slightly faster and more efficient gains at lower cost than free-choice feeding, in a test using eight lots of 8 gilts each.

The complete ration, fed from 9 to 10 weeks of age till the lots averaged 110 lb., consisted of milo 82.5%, soybean meal 14.4%, dicalcium phosphate 1.5%, calcium carbonate .6%, trace mineral salt .5%, and vitamin-antibiotic premix .05%.

This ration contained about 16% crude protein. After each lot reached 110 lb. weight, the protein content was reduced to 14% and was so continued till each gilt was removed from the trial at about 200 lb.

The supplement for all free-choice fed lots consisted of ground milo 8%, soybean meal 77%, dicalcium phosphate 8%, calcium carbonate 2.5%, trace mineral salt 2.5%, and vitamin-antibiotic premix 2.5%.

Pelleting the complete mixed ration did not improve feed efficiency nor reduce feed cost. The pelleted supplement appeared to be slightly superior to the meal, in terms of rate of gain, feed efficiency and feed cost per unit of gain. Differences were very small. Pelleting ground milo reduced rate of gain and increased feed cost.

Grinding milo moderately fine improved rate of gain and efficiency and reduced the feed cost per unit of gain.

FATTENING TRIALS WITH WESTERN FEEDER LAMBS: A net return of $50 to $75 per acre of wheat pasture during 90 to 100 days of grazing by lambs seems feasible, Dr. Robert Noble stated.

There are two essentials, he said. One is a break-even or plus margin in fat lamb market price compared to price paid for the lambs as feeders. Second is a net gain of 300 to 400 lb. per acre. He said such gains were obtained in a test during 1958-59 at the Fort Reno station.

Five hundred grade Western lambs were used in the experiment. When the wheat pasture was stocked at the rate of 10 lambs per acre, they averaged .38 lb. gain per head daily, or 302 lb. per acre, for the 82 days they grazed.

Feeding 1 lb. of milo per lamb daily, with the same stocking rate, increased the average daily gain per head to .42 lb., and the total gain per acre to 400 lb.

The net gain per acre was 173 lb. when the wheat pasture was stocked at five lambs per acre. Supplemental feeding of 1 lb. milo per lamb daily increased net gain per acre by only 14 lb.

Self-feeding a mixed ration of 45% milo, 5% molasses, and 50% alfalfa hay was reported to be satisfactory. The lambs averaged 2.3 lb. of the mixture consumed, and .63 lb. gain per head daily. Stocking rate was 10 lambs per acre. This was the fattest of the six lots of lambs in the test. Condition of the wheat pasture at the end of the 68 days grazing indicated

CONVENTION DISPLAY—This display is one of five used by the Stone Mountain Grit Co., Lithonia, Ga., at conventions and sales meetings to promote interest in the firm's Stonemo grit. The display has been shown at more than a dozen conventions in midwestern and eastern cities.

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that the stocking rate could have been doubled, to 20 lambs per acre.

A rye-and-vetch pasture gave the poorest results in this test, perhaps because of slow early growth of the pasture.

All lots of lambs in this test lost $2.50 to $3.93 per lamb, because of a negative margin of 6½ to 7½¢ lb.

Dr. Noble said that a 6 mg. implant of stilbestrol gave slightly better results than a 3 mg. implant, in four of six lots of lambs. No side effects were noted. He pointed out that stilbestrol as an implant for lambs has not been approved by the U.S. Food & Drug Administration.

Reporting another test, he said Aureomycin as a feed ingredient increased average daily gain of lambs by .1 lb. With the Aureomycin in salt, the increase was .17 lb. Addition of soluble Aureomycin to drinking water did not improve gains, he said.

LEVEL OF SUPPLEMENTAL WINTER FEEDING FOR FALL-CALVING COWS: A test reported by Dr. Arnold Nelson was related to the increasing practice of calving beef cows in the fall. When the cows, nursing calves, are grazed yearlong on native grass, it is important to determine the most satisfactory level of supplemental winter feeding, he said.

Another question, he said, is whether calves which are to be marketed as feeders in mid-summer should be creep-fed while growing.

Four years' results showed that neither the high level of wintering for the cows, nor the creep-feeding of calves until weaning, was profitable on the basis of the costs prevailing during the four years.

The high level of wintering for the cows resulted in a 30-lb. weight advantage for the calves at weaning compared with calves from cows wintered for a low level of gain. However, the 30 lb. was not sufficient to meet the $20 cost of extra feed.

During the four years, the cows wintered for high level of gain averaged 90% calf crop. Those on the low level of gain averaged 86%.

Creep-feeding the calves for 200 days resulted in 70 lb. additional average weight, compared with calves that were not creep-fed. But the calves averaged 875 lb. of feed, worth $25, which was more than the value of the extra gain.

Dr. Nelson said that current tests indicate that a low level of wintering is not satisfactory for heifers producing their first calf. He said further that it may be satisfactory to creep-feed calves only till grass is available in the spring.

FEED ADDITIVES AND GRAIN PREPARATION FOR FATTENING BEEF CATTLE: Pelleting ground milo for fattening steer calves was a profitable practice in a test reported by Dr. L. S. Pope. And it appeared that no more than 12% crude protein was needed when calves fed this type of ration were stimulated by stilbestrol.

Addition of 75 mg. of an antibiotic per head daily, to the ration, resulted in a higher appraised value of the cattle on foot, but addition of a tranquilizer showed no apparent advantage.

Seven lots of 10 choice, fall-dropped steer calves were put on feed last Oct. 13 and were gradually worked up to a full feed of milo, plus protein supplement, 1 lb. of dehydrated alfalfa meal pellets per head daily, and a limited amount of sorghum silage.

The calves fed pelleted milo were 11.3% more efficient in conversion of milo, showed $1.09 less feed cost per cwt. of gain, and were $6.04 per head more profitable, compared with calves fed rolled milo. These results were approximately the same as in a test reported at Feeders Day in 1958.

Dr. Pope said that 12% crude protein, the level which showed to best advantage, was supplied by 1.5 lb. of 40% cottonseed meal per head daily, in addition to other ration ingredients. Calves that got 2.5 lb. of the meal per head daily ate less milo per cwt. of gain than those which got 1.5 lb., but this was offset by cost of the extra cottonseed meal.

Feed Mills in Turkey

ISTANBUL, TURKEY—New feed plants are planned for Istanbul, Bandırma, Eskisehir, Izmir and Mersin, it has been announced. These are in addition to the two new plants that started production in Ankara and Konya in 1958 and to a plant in Erzurum scheduled for completion in July, 1959. Total output from the eight facilities will be in the vicinity of 172,000 tons of feed per year.

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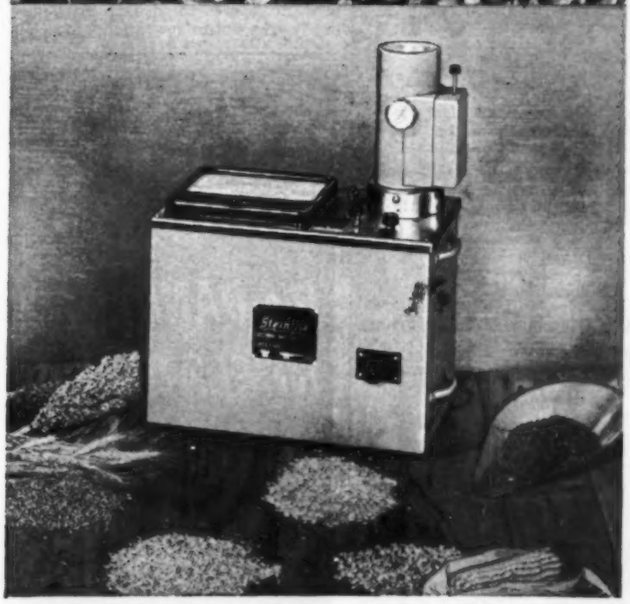

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DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7524—Adjustable Conveyor

The Minneapolis Sewing Machine Co., Inc., announces a new model LS-100 adjustable conveyor which features an all-metal slat type conveyor belt. The conveyor and the sewing head can be regulated to the

correct position for the operator's size and the size of the bag to be closed. Of all metal construction, the LS-100 conveyor raises or lowers with a turn of the crank, giving vertical adjustment to sew any size bag from 5 lb. to 200 lb. The chain driven slat conveyor is powered by a heavy duty gear head motor. For details, check No. 7524 on the coupon and mail to this publication.

No. 7523—Material Study Report

Moisture determination tests made in samples of rolled oats by the Model 104 Nuclear Magnetic Resonance Analyzer (NMR) are described in Material Study Report No. 24.58 published by Schlumberger Well Surveying Corp. The report says the firm's technique has been applied to the determination of moisture in rolled oats between 7% and 15.7% H_2O on a wet basis. Appended calibration curves on which the NMR sign (per gram of sample) is plotted against the moisture content as determined by the oven method on a wet basis illustrate the precision of the NMR technique, the company said. Copies of the report can be obtained by checking No. 7523 on the coupon and mailing.

No. 7526—Bin Vibrator Catalog

Publication of a catalog on electric vibrators has been announced by Syntron Co. The 12-page, illustrated booklet gives descriptions, data and specifications for 14 standard vibrators. Also included are illustrations and information on separate vibrator controllers. Typical installations are also illustrated. For copies, check No. 7526 on the coupon and mail.

No. 7525—Animal Feeding Bulletin

The 1959 edition of "Feeding Practices" has been published by the National Cottonseed Products Assn. The bulletin contains information on how to blend into practical feeding practices the knowledge of the characteristics and functions of feeds and the nutritive requirements of various types of livestock and poultry. It stresses efficient production. The bulletin has 48 pages, gives specific feeding recommendations and standards for each class of livestock and poultry. Suggested feeding and management practices are illustrated with color and black and white photographs. To obtain a copy, check No. 7525 on the coupon and mail.

No. 7522—Single Laying Nest

A single unit laying nest has been introduced by Bel Echo Metal Products Co. The nest houses five to six birds and may be used individually or in units of 100 or more. It hangs on a nail on any solid surface. The nest

is constructed of rust-resistant galvanized steel with a redwood perch. The perch also forms the floor of the nest and can be removed for cleaning. The height of the nest is 17 in., it is 12½ in. deep and 12 in. wide. The 7½-in. entrance hole has a rolled edge to prevent injuries to the birds. For details, check No. 7522 on the coupon and mail to this publication.

No. 7528—Feed Fortification Combination

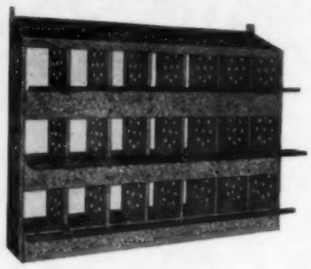
Specifide, Inc., has announced a new line of feed fortification products known as Specifide's Combo mixes. The line comprises a total of eight different blends of vitamins and antibiotics, plus arsenicals, designed to meet the requirements of most poultry and swine feeds. According to the company, the line of mixes offers maximum flexibility in fortification blends without the trouble and extra cost usually involved in having individual prescriptions filled. Complete information is available by checking No. 7528 on the coupon and mailing to this publication.

No. 7521—Pet Diet Supplement

Specifide, Inc., announces a vitamin-mineral dietary supplement tablet for dogs and cats. Called "Vita-Pets," the product has 19 different vitamins and minerals, designed to correct deficiencies and to promote a more rapid recovery from illnesses and other stresses. Vita-Pets are packed in bottles of 50 tablets. Complete information can be obtained by checking No. 7521 on the coupon and mailing.

No. 7520—Galvanized Nests

The National Ideal Co. has announced the addition of two new models to its line of Premier galvanized nests. One of the models has 14 individual nests in two rows of seven each; the other has 21 individual nests in three rows of seven. Each complete unit is 56 in. wide and 12 in.



deep, with nest openings of 8 in. by 8 in. The nests are constructed of heavy galvanized steel. Removable nest bottoms facilitate cleaning and nests are lice and mite proof. Exposed metal edges are folded to prevent injury to the birds. Flat wooden perches, painted red, are hinged to swing upward and close the nests. They are placed so that the hens step down into the nest, a feature which reduces picking, it was noted. Check No. 7520 on the coupon and mail for details.

No. 7519—Unloading Combination

An unusual flat storage unloading combination was devised by the Seedburo Equipment Co. and the Andrews Machine Co. when a Seedburo Stohr Power Shovel was mounted on an Andrews Model 1000 Portable Auger. The power shovel was placed on the tube directly above the intake of the auger. The capacity of the auger is 9,600 bu. an hour and by pulling grain into the auger hopper with the power shovel, maximum capacity is assured at all times, company literature stated. One man can handle the entire operation; a push-

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- ☐ No. 7523—Material Study Report
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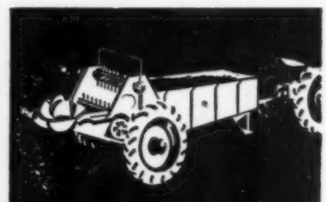

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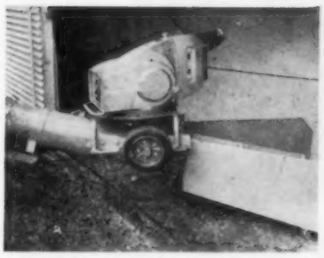

button on the power shovel handle starts and stops the shovel pulling cycle. The push button must be depressed during pulling cycle; it functions as a "dead man switch" by stopping immediately when released. For details, check No. 7519 on the coupon and mail.

No. 7509—Aureomycin Promotion

A promotion in which dealers can offer poultry customers a free automatic water medicator with each order of four 25 lb. drums of Aureomycin Soluble Powder is being sponsored by American Cyanamid Co. The medicator is attached directly in the lines of automatic water systems and dispenses the antibiotic into the water system. The offer of the "Auto-Medic" runs through June 30, and for further information, check No. 7509 on the coupon and mail to this publication.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs

No. 7480 — Testing instrument, Seedburo Equipment Co.

No. 7481—Magnesium bins, Tote Systems, Inc.

No. 7482—Pig parlor cleaner, James Manufacturing Co.

No. 7483—Leasing plan, Nationwide Leasing Co.

No. 7484—Vibratory feeder catalog, Syntron Co.

No. 7485—Enzyme activator literature, Biochemical Corporation of America.

No. 7486—Bulletin on masks, Flexo Products, Inc.

No. 7487—Shipping equipment booklet, K. E. Savage Co.

No. 7488—Broiler test suggestions Bowman-Martin Development Breeding Farms.

No. 7489—Dual unloading system Barnard & Leas Manufacturing Co.

No. 7490—Procaine penicillin, Eli Lilly & Co.

No. 7491—21-hole laying nest, Oakes Manufacturing Co.

No. 7492—Wall chart, Burrows Equipment Co.

No. 7493—Pellet cleaning shoe, Sprout, Waldron & Co., Inc.

No. 7494 — Equipment catalog, Klein Manufacturing Co.

No. 7495—Grain drier series, Aeroglide Corp.

No. 7496—Bulk handling unit, Ripco Air Systems, Inc.

No. 7497—Corn sheller wall chart, Belle City Manufacturing Co.

No. 7498 — Moisture conversion chart, Seedburo Equipment Co.

No. 7499 — Recirculating fan, Sprout, Waldron & Co., Inc.

No. 7500—Temperature system brochures, Rolfes Grain Aeration Cos.

No. 7501—New drier size, Shanzer Manufacturing Co.

No. 7502—Crib, bin drier, Lakeshore Manufacturing Co.

No. 7503—Bulk concentrate carrier, Champion Portable Mill Co.

No. 7504—Bulk scale, Burrows Equipment Co.

No. 7505—Bulk weigh station, Ross Manufacturing Co.

No. 7506—Feed flavor file, Flavor Corporation of America.

No. 7507—Folder on cattle drug, Merck & Co., Inc.

No. 7508—Molasses heater literature, Sprout, Waldron & Co., Inc.

No. 7509—Aureomycin promotion, American Cyanamid Co.

No. 7510—Air vibrator, National Air Vibrator Co.

No. 7511—Car liner, Ford Carliner Division.

No. 7512—Coding system, Ultra-Violet Products, Inc.

No. 7513—Engineering change, Dorsey Trailers.

No. 7514—Plate magnet, Stearns Magnetic Products.

No. 7515—Slider belt conveyor, Strong-Scott Manufacturing Co.

No. 7516—Feed body, Simonsen Manufacturing Co.

No. 7517—Hog holding chute, Caswell Manufacturing Co.

No. 7518—Direct mail piece, Prater Pulverizer Co.

APHF Names Speaker For Stag Breakfast

KANSAS CITY — "Poultrymen—With or Without" is the title of an address to be presented by Charles M. Hanna, a consultant and a director of the Wm. H. Welsh Co., Chicago, at the Men's Stag Breakfast of the American Poultry & Hatchery Federation convention in St. Louis July 21-23.

The breakfast will be held the morning of July 22 in the Gold Room of the Hotel Sheraton-Jefferson.

Mr. Hanna is a graduate of Notre Dame University and the Northwestern University School of Law. He served as an operations executive for Sears, Roebuck & Co. and in several government posts. In addition to his present duties with Wm. H. Welsh Co., he is executive secretary of the National Home & Property Owners Foundation and a member of the National Citizens Committee for the Hoover report.

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Willis Sauder (above), owner of Sauder's Feed Service, operates the new mill in the foreground, plus the old mill and the modern feed store.

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IT'S LICKIN' GOOD . . . PROFITABLE, TOO! YOU GET THE THREE MOST IMPORTANT CALF FOOD FACTORS IN CAF-SUPP!

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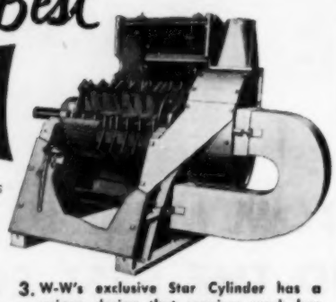

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HALF-CENTURY DEALERSHIP—Founded in 1881 by three brothers, the George B. Brown Corp. was incorporated in 1936. The firm is a half-century Wirthmore dealer in Ipswich, Mass. In this photo, C. D. Worthing (right), Wirthmore vice president, presents the Wirthmore half-century certificate to a group of employees of the George B. Brown Corp.

50-Year Feed Dealers Honored

A dealer for Wirthmore Feeds has to be around quite a while before he can call himself much of an old-timer.

There are a few who have a real claim on the title, however. They've been with the feed firm 50 years or more—some of them since the beginning of the Wirthmore dealer organization, which was formed by the Chas. M. Cox Co.

The Chas. M. Cox Co. is reported to have sold the first bag of mixed feed in New England shortly after the turn of the century. A year or two later, the Wirthmore brand name was coined and a dealer organization was formed.

Some of those early dealers are still actively in business, and today Wirthmore Feeds, Inc., has a growing roster of half-century dealers who display a specially-engraved certificate in their stores and offices.

Among the early Wirthmore distributors still operating today are the Depot Store, Littleton, N.H.; W. K. Gilmore & Sons, Walpole, Mass.; George B. Brown Corp., Ipswich, Mass.; H. Bruckmann Grain Co., Lawrence, Mass.; Phaneuf & Sons, New Bedford, Mass.; R. G. Davis, New Haven, Conn., and the City Feed Co., now Wirthmore Store, St. Albans, Vt.

Certificates honoring 25-year and 50-year dealers are awarded periodically at informal ceremonies. The presentations are made by officials of the company.

75 YEARS — H. Bruckmann Grain Co., Lawrence, Mass., was founded 75 years ago by Herman Bruckmann, and it is still owned by the same family. Fred L. Tinsch is manager. In this photo, the assistant manager, Ernest C. Tinsch, is shown among the firm's hardware and household wares. The store is a major retailer of Wirthmore Feeds.

FAMILY FIRM—One of Wirthmore's oldest dealers is W. K. Gilmore & Sons, Inc., Walpole, Mass., a business founded in 1876 and in the Gilmore family continuously since then. James F. Gilmore (left), president, is shown with his brother, Frederick. The firm also operates outlets in Franklin, Medfield and Norfolk, Mass.

54 YEARS OF SERVICE—The Depot Store, Littleton, N.H., has been handling feeds from Wirthmore's St. Albans (Vt.) Grain Co. for 54 years. Shown receiving the store's half-century certificate is its president, George Edson, II (third from left). Making the presentation is Leo Ledoux, who served the area for many years before his recent retirement. Enjoying the occasion are Frank Collingwood (left), district manager, and Mark Devereux (right) of the sales staff.

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Or, sprinkle right on top of feed in troughs. NATICO penetrates—helps eliminate choking dust, "fines" that discourage appetites.

NATICO improves the palatability of silage, maintains sweetness, color and fragrance. NATICO prevents top spoilage and improves digestibility. There's no waste because NATICO's all-molasses solids and important nutrients make it ideal for use in silage. It's easy to use and you use it all! Remember—something wonderful happens when you add NATICO.

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- **SAFE**—Anyone can operate it. No special training required. Can be obtained with overhead suspension. Also, can be supplied with pedestal bracket. Send for descriptive literature.

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Research Findings Presented at Kansas State University Livestock Feeders Day

By MYRON McCARTOR
Kansas State University

MANHATTAN, KANSAS — The 46th annual Livestock Feeders Day at Kansas State University attracted approximately 1,000 livestockmen who heard discussions on pelleting, stilbestrol, tranquilizers, trace minerals, and utilization and management of Kansas pastures.

Results of experiments with pelleted high roughage and pelleted high concentrate rations, and a question-and-answer session on the use of stilbestrol interested visiting stockmen most.

The first report in the day long session gave results of an experiment using forage type sorghum and alfalfa hay as the only feeds in a wintering type ration for heifer calves. This experiment compared alfalfa hay and sorghum silage, and alfalfa pellets and sorghum pellets in various combinations.

The alfalfa was kept at a constant level of 5 lb. per day throughout the feeding period, while the sorghum silage or pellets were fed free choice. Prairie hay was added to one lot receiving an all pelleted ration to determine if long hay was in any way necessary to the well being of the animals. The treatments and gains are as follows:

Lot No.	No. animals	Average daily gain	Per cent increase	Amount dry matter consumed
1	10	1.05	..	11.26
2	10	1.26	20	11.45
3	10	1.34	28	15.08
4	10	1.58	50	15.65
5	10	1.51	43	15.90

Lot one received loose hay and silage; lot two, alfalfa pellets and silage; lot three loose hay and sorghum pellets, and lots four and five, alfalfa pellets and sorghum pellets. Lot five also received one pound of prairie hay.

Lots four and five were treated the same except for the additional prairie hay, which had no beneficial effect.

Benefits of Pellets

Feed cost per 100 lb. gain was $5.13 more when the entire ration was pelleted; however, money saved in feeding and storing the pellets was not deducted from the additional cost. The pellets were stored in a conventional wooden bin, and were fed only once a week. This, plus the fact that the amount wasted was much less when pellets were fed, means a considerable saving to offset the additional cost of pelleting.

"Undoubtedly the cost of pelleting could be reduced considerably if this method of feeding should be adopted by feeders in a given area," commented Prof. Fred W. Boren, who is in charge of the experiment. "The cost of pelleting was largely an estimate on the part of the processor, and is not necessarily the true cost."

Why do the pellets produce better gains? "Probably the most apparent reason is the increased consumption of total dry matter when pellets are fed, leaving more nutrients over maintenance needs with which to gain," says Prof. Boren.

The second report on pellets was given by Dr. Draytford Richardson, who has been particularly interested in ways of improving the value of sorghum grain. The experiment using combine-type grain sorghum consisted of two parts.

The first part compared pellets made from the whole grain sorghum plant with silage taken from the same field. The crop, which was estimated to make 45 bu. of grain per acre, produced six tons of silage, or 2.5 tons of dehydrated pellets per acre. The second part of the experiment compared cracked sorghum grain with pelleted sorghum grain.

The daily ration for all animals consisted of 4 lb. of alfalfa hay and .5 lb. of soybean meal plus the following: Lot one, 7.65 lb. dehydrated grain sorghum pellets; lot two, 20.55 lb. grain sorghum silage; lot three, 14.1 lb. atlas sorghum silage plus 4 lb. cracked sorghum grain, and lot four, 12.65 lb. atlas sorghum silage plus 4 lb. pelleted sorghum grain.

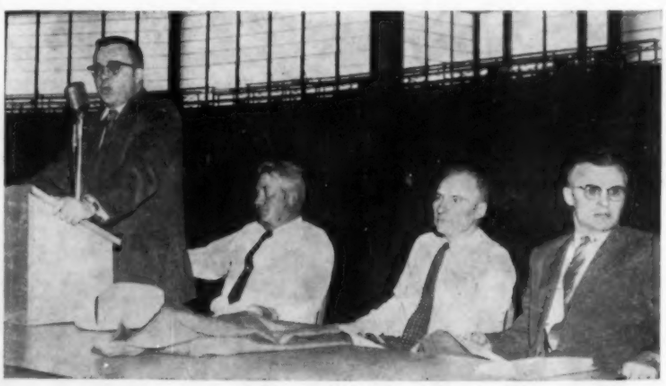
Test Results

Lot one gained 1.35 lb. per day; lot two, 1.36; lot three, 1.51, and lot four, 1.63. The dry matter intake was kept the same on lots one and two. These results indicate that the whole grain sorghum plant, when pelleted, is not superior to silage made from the same plant. However, in the second part of the experiment the pelleted sorghum grain increased the daily gain slightly, and increased feed efficiency.

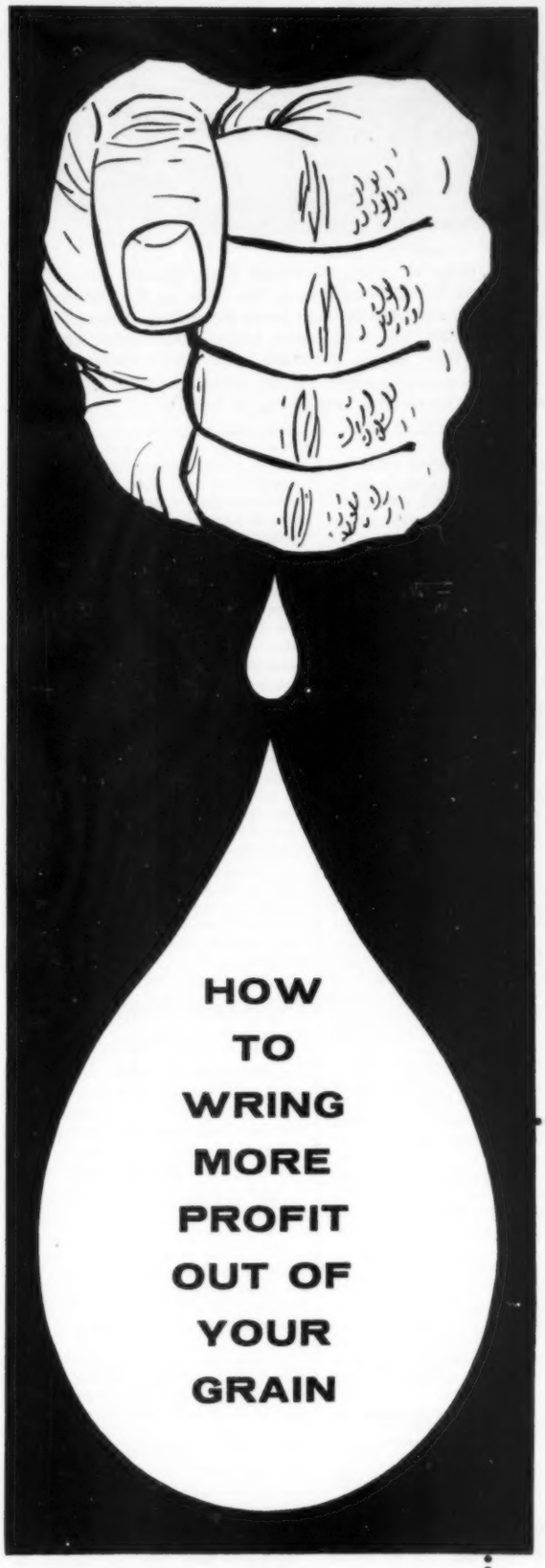
The improvement was more than enough to offset the cost of pelleting the grain. The cost of pelleting the whole grain sorghum plant was approximately four times the cost of ensiling; however, the saving in labor and equipment needed for feeding the pellets was not deducted from the cost of the pellets.

Why did pelleted grain produce better gains? "Possibly the answer lies in the fact that the feed passes through the rumen more rapidly, providing less opportunity for loss of energy through production of useless digestive by-products. Also, the feed should require less energy expenditure for the actual work of digestion. Another benefit may come from the fact that a larger surface area is exposed for the digestive enzymes to act upon when the feed is finely ground and pelleted," says Dr. Richardson.

In the question and answer session



K-STATE SPEAKER—Giving an address on animal disease control at the recent Kansas State University Livestock Feeders Day is Dr. Embert Coles of the school of veterinary medicine at Kansas State. Also shown (left to right) are: Ray Frisbie, president of the Kansas Livestock Assn., who presided at the session; Dr. Rufus Cox, head of the department of animal husbandry, and Dr. Draytford Richardson, animal nutritionist at Kansas State.



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NEW BULK EQUIPMENT—Four Mississippi firms recently received the new Dorsey bulk feed bodies pictured here. The firms are R&R Milling Co., Carthage; S&W Poultry Co., Hattiesburg; Garth Hatcheries, Pelahatchie, and Sanders Brothers, Laurel. The bodies were delivered by Capitol Trailer & Body, Inc., Jackson, Miss., Dorsey distributor. The Dorsey Bulkmaster line includes hydraulically operated auger and air unloading bodies and trailers and combination units for carrying bulk or bagged feeds.

of feed additives, stilbestrol received most attention. The panel, made up of animal husbandry staff members, gave specific answers to such questions as these:

Q. Does implanting on grass affect fattening gains?

A. No.

Q. How many times should I implant?

A. Two implants during the grazing and fattening periods, or no more than three on the Kansas deferred program. Implants should not come more often than every 120-160 days.

Q. Should I implant heifers with stilbestrol?

A. You may, but the response is less than with steers. No more than 12 mg. should be implanted.

Q. Should I implant calves on grass?

A. You can if you are going to feed them out yourself. If you plan to sell them off grass, the discrimination against them may be enough to offset the increased gain due to stilbestrol.

Q. What effect will stilbestrol have on the carcass of cattle treated with stilbestrol?

A. Stilbestrol cattle tend to grade lower when ribbed. The meat tends to contain more free moisture than untreated beef. Cooking and palatability of beef from treated cattle are as good as beef from untreated cattle.

Q. Is there any danger of ill effects from eating stilbestrol treated beef?

A. No, not if the recommended amount is fed or implanted. Implanting any place other than the ear is not an approved practice and can cause your cattle to wind up as tankage.

Tranquilizers

After two years of work with tranquilizers, Dr. Berl A. Koch said, "The results have not been consistent. I don't think tranquilizers are going to revolutionize cattle feeding, at least from what we know of them at the present time."

Dr. Koch also gave a progress report on a basic research project with tranquilizers and stilbestrol in which 24 steers are being individually fed rations containing stilbestrol and/or tranquilizers. The two tranquilizers being studied are Tran-Q (Hydroxyzine), and Trifluomeprazine. The 24 steers will be placed in metabolism stalls to study nitrogen retention, ration digestibility, ration energy utilization and calcium and phosphorus balance.

Summarizing experiments with trace minerals at Kansas, Nebraska and Oklahoma, Dr. E. F. Smith concluded that "trace minerals are not necessary in the rations of cattle on grass or in the feedlot when fattened on sorghum grain. Some advantage from use of trace minerals has been reported when corn is used in the fattening ration."

Stockmen were told that burning pastures is not a good practice, but if it must be done, then burning should be done late in the spring so that land will be bare the least amount of time.

President Named by Feed Distributorship

LITTLE ROCK, ARK.—A. Howard Stebbins, Jr., has been named president of Adkins-Phelps Retail Stores, Inc., and will supervise an expansion program for the retail outlets of the feed and seed distributorship.

Phelps Stores is a subsidiary of Adkins-Phelps Enterprises, North Little Rock.

Mr. Stebbins' appointment was announced at a special meeting of the board of directors at which David M. Phelps was reelected chairman. G. Ted Cameron was named vice president, G. D. Carpenter was elected president of Adkins-Phelps Seed Plant, Inc., and Mrs. Dorothy Martin was elected secretary-treasurer of the firm's Retail Store Corp.

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SERVICE— *from our mill to yours . . . As Scheduled!*

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PRODUCTS CO., INC. Emporia, Kansas

Cattle Disease Control Discussed at Meeting At Michigan University

EAST LANSING, MICH. — Dr. George Whitehead, Michigan State Department of Agriculture, reported on present and future programs of cattle disease control at the joint Conference of Dairy and Food Sanitarians and Dairy Fieldmen at Michigan State University recently.

Governmental agencies, he said, in cooperation with Michigan State University, are pooling their resources in an effort to determine the prevalency and reduce the incidence of diseases in cattle, especially brucellosis, tuberculosis and leptospirosis—all contracted by man.

In discussing the control of brucellosis, one of the primary causes of abortion in cattle, Dr. Whitehead said an estimated $100 million in calves and milk production were lost in 1953 by this disease throughout the nation.

"Since that time," he explained, "effective methods of control have cut down on the incidence of the disease. Over a three-year period, 1955-58, there has been an 80% reduction in the number of infected animals."

Future plans, according to the speaker, call for stepping up milk sampling from two to three times annually. Other control programs will urge wider use of official calfhood vaccinations and promote closer supervision of infected herds.

Bovine tuberculosis is increasing in Michigan, with the state average for the disease nearly five times higher than the national figure, Dr. Whitehead pointed out.

"However," he said, "the current number of infected animals represents less than 1% of the total, and all efforts of state and national agencies are concentrated in reducing the number of tuberculosis reactors. We have come a long way from the 1922 figure of 4.5% when the control program was initiated."

Turning to leptospirosis, a disease similar to brucellosis which may cause fatalities, abortions and a sharp reduction in milk production, Dr. Whitehead revealed the results of a survey conducted by the Michigan Department of Agriculture.

"More than 1,100 herds consisting of over 23,000 cattle were tested for the 'leptospira pamona' strain, thought to cause about 90% of the infection in cattle," he said. "Results indicated that 2.9% of the herds were infected, and only .4% of the animals had the disease."

Baughman to Expand Production Facilities

JERSEYVILLE, ILL.—The Baughman Manufacturing Co., Jerseyville, has purchased the former International Shoe Co. plant at Jerseyville to expand its production facilities.

George O. Hofstetter, Baughman general manager, said increased demands for the company's products prompted the purchase. The company makes bulk feed bodies, self-unloading bulk material transport bodies, and self-soaking hog feeders, among other products.

The general manager said the newly-purchased plant will be modernized and ready for occupancy soon. Plans are to produce parts and smaller products assembly in the new plant, and maintaining assembly lines for larger bodies in the original Baughman plant.

20 College Students Receive Pfizer Awards

PULLMAN, WASH.—Twenty agricultural college juniors from 18 states are recipients of scholarships awarded by Chas. Pfizer & Co., Inc., it was announced here recently by Hugh O. Dermody, assistant general manager of the company's agricultural division.

Four of the students from the western region traveled to Pullman to receive their awards in a ceremony which was part of an annual conference of college administrative and extension training representatives from land-grant colleges across the nation. The central region had seven winners, the southern states six and the northeast three, but they were unable to attend the Pullman event.

Pfizer set up the national scholarship awards in 1956 to encourage more promising young people to choose careers in extension work, particularly in animal health.

Applicants for the annual awards are required to prepare extension teaching plans on animal health or on health programs that benefit humans as well. They must have outstanding scholastic records and extensive background in 4-H Club work.

A national committee of agricultural extension service representatives selects the 20 regional winners from nominations made by 4-H Club or state extension service directors.

Semmes Bag President Dies at 65 in Memphis

MEMPHIS, TENN. — Joseph D. Crump, president, Semmes Bag Co. since 1956, died of a stroke May 26, at the Baptist Hospital. He was 65.

Mr. Crump organized the firm in partnership with the late Thomas A. Semmes, Jan. 1, 1946.

Mr. Crump began as an office boy with the American Bag Co. here in 1907 at the age of 14 and remained with the firm 39 years under that name and later under the Chase Bag Co. name. He managed the company plant in New Orleans from 1939 to 1942.

Four years after returning to Memphis, he helped organize the Semmes company and was executive vice-president until he became president in 1956.

Services were May 27, with burial in Elmwood cemetery. Survivors include his wife, a son, a sister and a half-brother.

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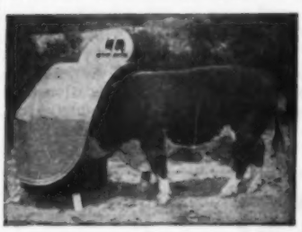

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You get all these Extra Services in addition to faster, easier, more accurate, lower cost one-operation mixing and better distribution with Blatchford's VITADINE and SWINEX!

1 Blatchford's Formulation Service
—"custom built" properly balanced feeds. Helps you build your own exclusive formulas to meet specific and changing local needs with better nutrition at lower costs. Formulas are scientifically calculated for you by Blatchford's to meet or exceed approved standards—assure top quality results!

2 Blatchford's Fortification Service
—newest developments in nutrition and disease control. Blatchford's Vitadine and Swinex fortifiers assure your feeds having the latest proven developments in micro-ingredients. Blatchford's staff of nutrition experts, specialized mixing equipment, continuous research program and years of experience keeps you out in front.

3 Blatchford's Registration Service
—makes registration easier with less time loss. Here's another plus service that saves you time and money. Blatchford's helps you prepare the necessary papers for formula registration and proper forms needed to meet tag requirements to pass national, state and local regulations.

4 Blatchford's Field Service
—better profit-producing results! Blatchford's field men, many with more than 20 years of experience, bring you valuable up-to-date nutrition information, manufacturing know-how and selling help. They help you evaluate local needs, keep up with the lastest trends and deliver better profit-producing feeds that keep customers satisfied!

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FOR PIG AND HOG FEEDS
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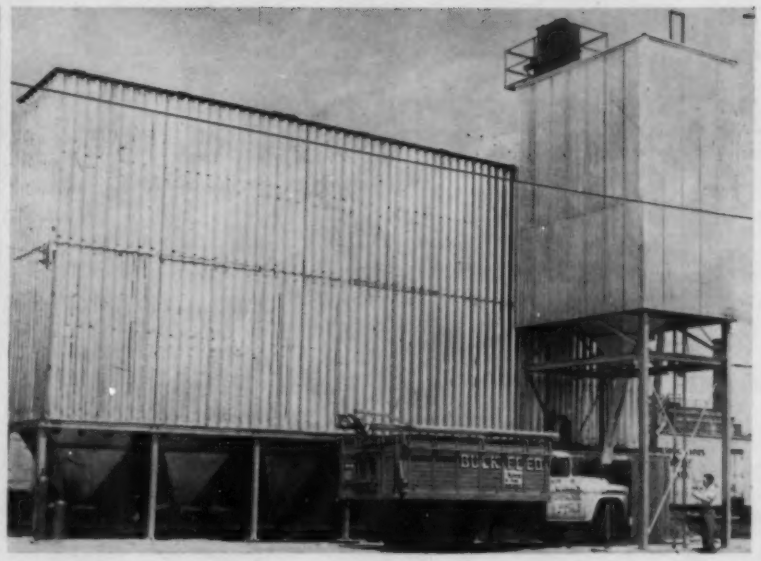

NEW BULK STATION—Shown is a new 195 ton-capacity bulk feed substation built in Oklahoma City by Nutrena Mills, Inc., Minneapolis. Feed is stored in the seven bins at rear, moved through a conveyor line running under "V" bottom of bins and up the elevator, then weighed and loaded through two 5,000-lb. bins in the tower at right.

Nutrena Mills Builds Bulk Feed Substation In Oklahoma City

OKLAHOMA CITY — A new bulk feed substation of 195-ton capacity has been built by Nutrena Mills, Inc., Minneapolis, in Oklahoma City. The substation will service a 21-county area in central Oklahoma.

R. Dwight Akers, warehouse and substation manager at Oklahoma City, said feeds from the new facility will be distributed by truck with sales and service handled through Nutrena's dealers in the area. Incoming feed is shipped by rail from the firm's Coffeyville, Kansas, plant where a 300-ton-capacity "parent" bulk installation was opened in January.

The bulk plant is adjacent to Nutrena's Oklahoma City warehouse, and is made up of six 30-ton steel bins and one 15-ton bin aligned over an enclosed conveyor. Each bin gravity feeds into the tube where a system of chain-powered "paddles" scoops the material into an elevator 44 ft. high. The conveyor is designed to prevent damage to the feed—usually in the form of pellets or crumbles—and to clean the tube as it moves, preventing mixing with subsequent feeds carried in the system, according to Mr. Akers.

An electrically-controlled scale on the higher of two 5,000-lb. load-out bins weighs the feed as it comes from the top of the elevator. Trucks beneath the bins are loaded by gravity flow. The entire system can weigh and position more than 30 tons per hour, Mr. Akers said, sufficient to supply a continuous line of trucks.

Incoming rail cars are unloaded by an air conveyor system which moves the feed to any of the seven storage tanks.

Mr. Akers said the facility would soon include a large auger-equipped delivery truck. Several Nutrena dealers in the area are equipped to handle bulk or plan installations in the near future, he said. Bulk feeds available from the Oklahoma City station include turkey feeds, swine formulas and poultry rations.

Bill Jones **George Uhlman**

Hot Spot Detector Names Sales Engineers

DES MOINES, IOWA — The appointment of Bill Jones and George Uhlman as sales engineers for Hot Spot Detector, Inc., Des Moines, has been announced by R. L. Wilson, sales manager for the firm.

Mr. Uhlman will represent Hot Spot in Missouri. He is a long-time resident of the Kansas City area and until recently has been associated with the Walker Marketing Corp. as territory manager.

Mr. Jones will work in Arkansas, Tennessee, Louisiana and Mississippi. He is a native of Little Rock, Ark., and is an engineering graduate of the University of Arkansas. He was area supervisor for the Niagra Chemical Co., Arsenal, Ark., before joining Hot Spot.

The company's temperature and engineered aeration systems are sold and serviced by 23 engineers throughout the U.S., according to Mr. Wilson.

Egg Production Clinic Planned in Louisiana

BATON ROUGE, LA.—A commercial egg production clinic for Louisiana egg producers will be held June 15 in the agricultural extension service auditorium in Seaman A. Knapp Hall at Louisiana State University here.

Clyde Ingram, poultry specialist with the Louisiana State University Agricultural Extension Service, announced the clinic. He said the program will begin at 8:45 a.m. and close at about 4 p.m.

Topics to be discussed include contract egg production, flock management and feeding practices and insect, internal parasite and disease control. Speakers will include members of the Louisiana State University and Texas A&M College staff as well as directors of the state diagnostic laboratories at Baton Rouge and Ruston.

Mr. Ingram said producers will be allowed time to ask questions after each talk.

The clinic is sponsored by the Louisiana State University Agricultural Extension Service in cooperation with the university's poultry industry department and Poultry Industries of Louisiana, Inc.

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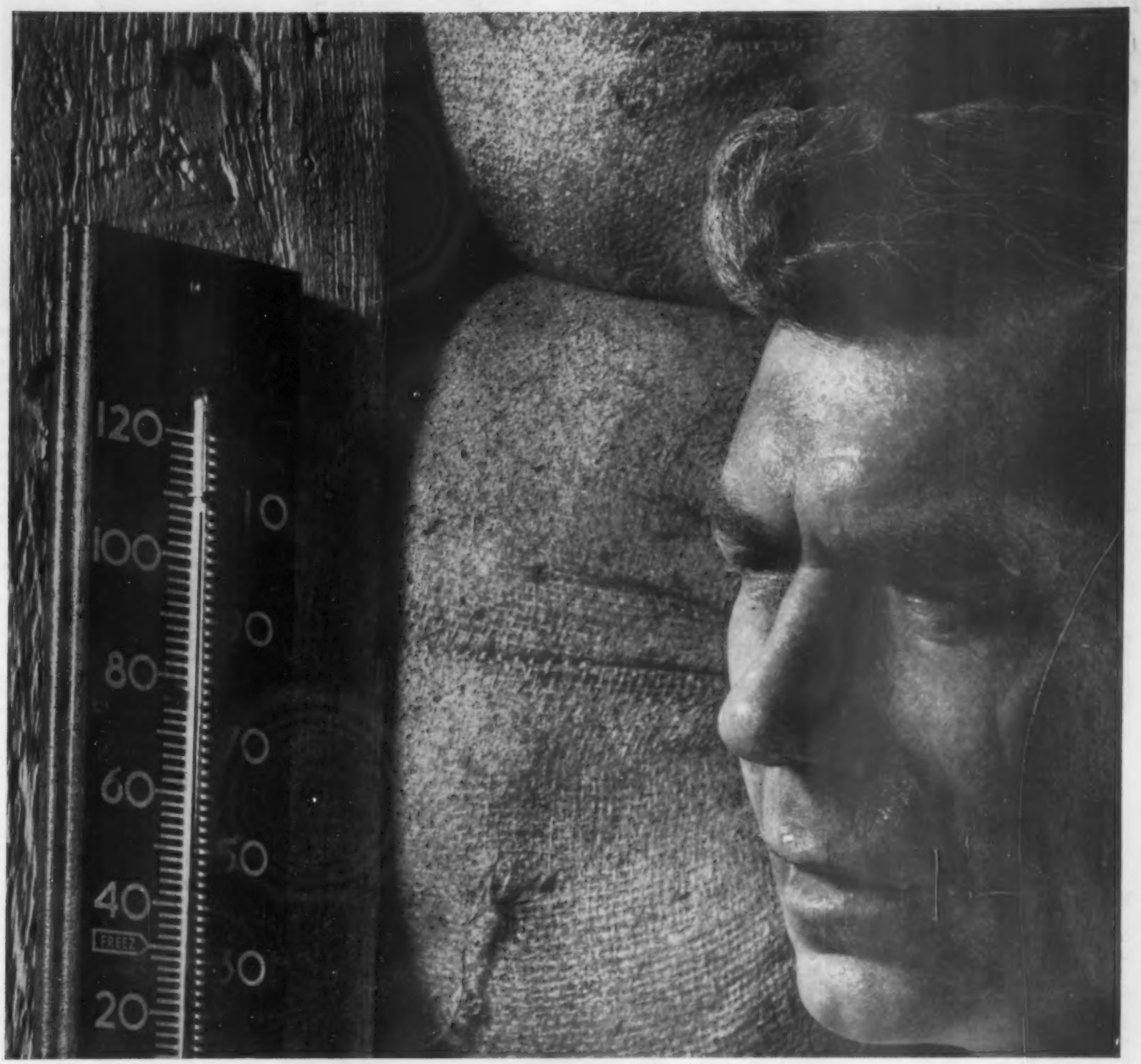

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Poultry Program Links All Phases Of Production

By Special Correspondent

WALDRON, ARK. — The Scott County Industrial Development Corp. has established a new poultry program, complete with producers, houses, feed mill, processing plant, hatchery and qualified supervisors.

Although the program may have been tried before in other parts of the nation, it is believed to be the first of its kind for the integrated Arkansas poultry industry.

The program is the outgrowth of a problem. The county needed new industry to pep up a sluggish economy, and someone came up with the idea of a "poultry corporation."

The idea caught on, and the corporation is financing the construction of everything needed to complete the job—from brooder houses to processing plant.

Residents of the county raised more than $76,000 through the sale of shares, and the corporation is borrowing another $135,000 from the Arkansas Industrial Development Commission.

Officials already have financed construction of at least 10 houses with a capacity of 10,000 birds each. And, the new funds will be used to finance a feed mill, processing plant and hatchery.

Hope for 500,000 Birds

Corporation officials believe the operation will be profitable and successful. They hope to soon have 500,000 birds on feed, enough to keep the feed mill, hatchery and processing plant operating at all times.

New houses will be constructed as farmer-growers are signed to participate in the program. The producers will be required to use standard-sized houses, feed and management provided by the corporation.

To hold grower interest, each operator is required to own his own house in return for a guaranteed market for the broilers he produces.

A corporation spokesman said producers will be able to average "a net profit of from $200 to $225 monthly for each 10,000 birds handled."

The corporation will furnish the birds, feed, market and will give management advice. A local feed and poultry operator is providing the technical knowledge to keep the program rolling.

The feed mill will employ about 25 persons full time, and the processing plant is expected to hire another 150 persons. A few others will be employed when the hatchery goes into production.

The brooder houses are being constructed by Herbert Cherry, who has a poultry operation of his own. The houses are 30 by 325 ft. They are equipped with electric slab brooders, which measure 5 by 16 ft.

All houses are well ventilated. Sides of the buildings can be removed and the windows are hinged so they can be raised or lowered for the proper amount of air.

While bulk feed bins are constructed with each house, growers are given a choice of either automatic or manual feeding equipment. Automatic waterers are used.

Birds are now processed at another Arkansas town, but all processing will be done here when the processing plant is constructed.

A large number of farmers have expressed an interest in the program.

HAVE SOME PEANUTS — Francis Branan (left), president of the Florida Seed & Feed Co., Ocala, Fla., was up to his usual activity of building good will and fellowship at the Miami Beach convention of the Florida Seed & Garden Supply Assn. A past president of the association, he is shown here giving a bag of roasted peanuts to Nate Mayo, supervising inspector of the inspection bureau of the Florida Department of Agriculture. The peanuts, which are packaged and sold by Mr. Branan's firm, are a familiar trademark at state conventions, and he makes sure there are plenty on hand for everyone attending.

Convention Plans Set

SPOKANE, WASH. — Final arrangements have been announced for the annual convention of the Pacific Northwest Grain Dealers Assn., Inc., to be held June 11-12 at the Davenport Hotel here. Committee meetings are planned for June 11 and an educational session as well as the business session the following day. Entertainment and a ladies' program are also planned.

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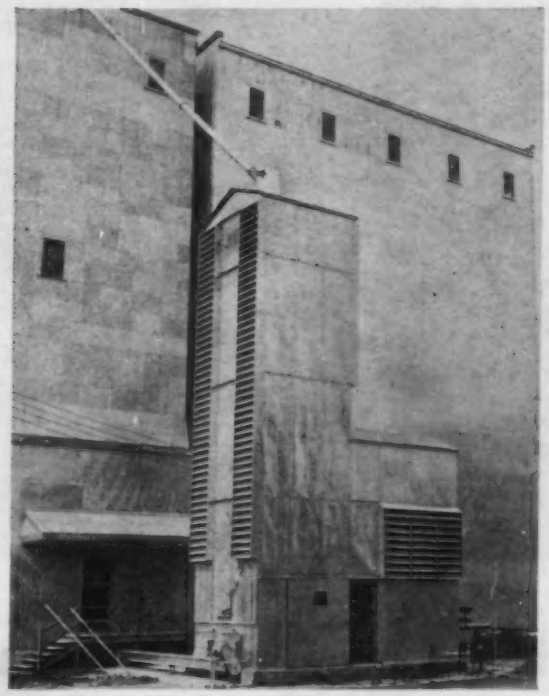

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Pennsylvania Poultry Program Announced

HARRISBURG, PA.—Poultry and egg producers in Pennsylvania and surrounding states will be brought up to date in feeding, housing, started pullets, marketing and disease control at the Pennsylvania Poultry Federation annual meeting to be held June 18-19 at the Pennsylvania State University campus in University Park.

The program is planned to be of interest to egg producers, broiler raisers and turkey men.

Sponsored by the federation in cooperation with the department of poultry husbandry at Pennsylvania State University, the program features nationally prominent speakers, entertainment for the entire family and tours of the new turkey building and poultry disease research laboratory.

Speakers and their subjects are: Robert Bickford, assistant director of research, Wirthmore Feeds, Inc., Waltham, Mass., "What's New in Feeding Chickens and Turkeys?"; Dr. Glenn Bressler, Pennsylvania State University, "What's New in Poultry Housing and Mechanical Equipment?"; John Bergdoll, turkey supervisor, Allied Mills, Inc., Indianapolis, "Management Pointers for Growing Better Turkeys"; R. M. Hendrickson, poultry and egg marketing specialist, General Mills, Inc., Minneapolis, "Marketing and Merchandising Quality Eggs"; Dr. L. M. Skamser, manager, technical service, American Cyanamid Co., Princeton, N.J., "Preventive Medication in the Control of Chicken and Turkey Diseases"; Dr. George Christie, Eastern States Farmers' Exchange, Springfield, Mass., "Latest Information on Coccidiosis Control"; Dr. Robert Gentry, Pennsylvania State University, "Progress Report on Poultry Disease Research at Penn State"; Dr. P. H. Seitz, chief of the poultry division, Pennsylvania Department of Agriculture, "Pennsylvania Diagnostic Service."

Also scheduled are four panel discussions. Three will be held the first day. One in the morning will discuss "What Is Needed to Make the Started Pullet Program Successful?" The two in the afternoon will cover "What Is the Future of the Chicken and Turkey Industry—How Can I Survive?" and the "Pennsylvania Certified Egg Program."

The fourth panel, "Poultry Health Pointers," will be presented the morning of June 19 following the talks by Dr. Skamser, Dr. Christie, Dr. Gentry and Dr. Seitz.

A discussion of "Hypnosis and You" is to be the main address of the annual banquet the evening of June 18. Another banquet highlight will be the presentation of the 1959 Poultryman of the Year Award. The annual business meeting is set for 3:15 p.m. June 18.

An entertainment highlight will be the Drumstick Golf Tournament to be held the afternoon of June 19.

Khapra Beetle Hearing Set at Dallas June 23

WASHINGTON—As a result of the finding of infestations of the khapra beetle in two Texas counties, the U.S. Department of Agriculture has scheduled a hearing June 23 at Dallas, Texas, to consider proposed extension of the federal khapra beetle quarantine to include Texas.

Khapra beetle infestations were recently discovered in El Paso and Hudspeth counties, the two westernmost counties in Texas. El Paso County is adjacent to Dona Ana County, New Mexico, where a number of new infestations have been found in recent months.

The hearing is to be held in the second floor auditorium of the Dallas Power & Light Co., 1506 Commerce St., Dallas, at 10 a.m. on June 23.

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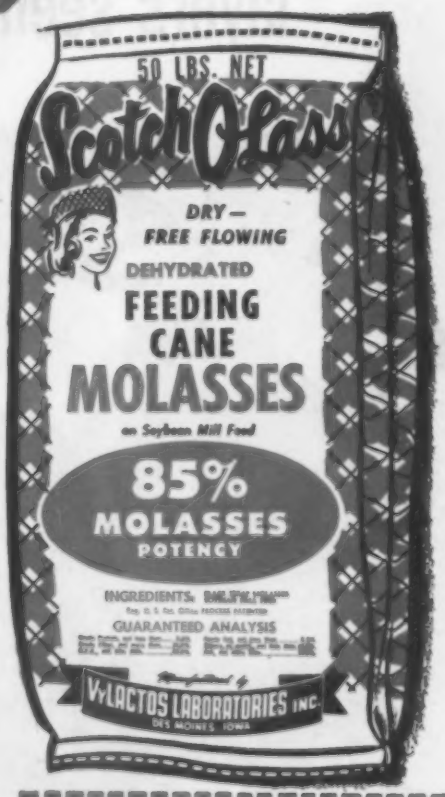

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PLANNING POULTRY COURSES—This group is planning three poultry short courses to be held at Abraham Baldwin Agricultural College in Tifton, Ga., during the fiscal year beginning July 1. Shown during the annual short course planning session recently, the group includes (left to right, around the table): Clarence Smith, Tift County broiler grower; R. L. Carter, Jr., Moultrie, sales manager for Ralston Purina Co.; T. J. Graham, vocational agriculture teacher at Sylvester, Ga.; John Lindsey, Tifton, feed manufacturer, owner of Tifton Feed & Milling Co.; Arthur Gannon, Athens, extension poultryman, chairman of the committee; Perry McCranie, Tift County egg producer; Mrs. Cecile Bailey, secretary to Dean T. M. Cordell, short course director for the college; Dr. F. Driggers, Farmers Home Administration loan officer, Atlanta, and Halit Kuldhoglu, extension poultryman from Turkey, who was sitting in on the committee as an observer.

Georgia College Plans Year's Short Courses

TIFTON, GA.—Feed men, feeders and representatives of related fields joined extension workers and personnel of the University of Georgia and of Abraham Baldwin Agricultural College here recently to plan short courses for the school's fiscal year.

Of 40 courses planned for the year beginning July 1, 1959, three are concerned with poultry and eggs and five with cattle and hogs. The courses will be held at the college on a one-day basis on dates to be announced later.

Among those working on the poultry planning committee were: Arthur Gannon, Athens, extension poultryman, chairman; R. L. Carter, Jr., Moultrie, Ralston Purina Co., and John Lindsey, owner, Tifton Feed & Milling Co.

Included among the members of the livestock planning committee were Byron L. Southwell, head of the department of animal husbandry at Georgia Plains Experiment Station, chairman, and Dr. W. C. McCormick, animal husbandryman at the station.

Abraham Baldwin Agricultural College is a coeducational junior college located in Tifton.

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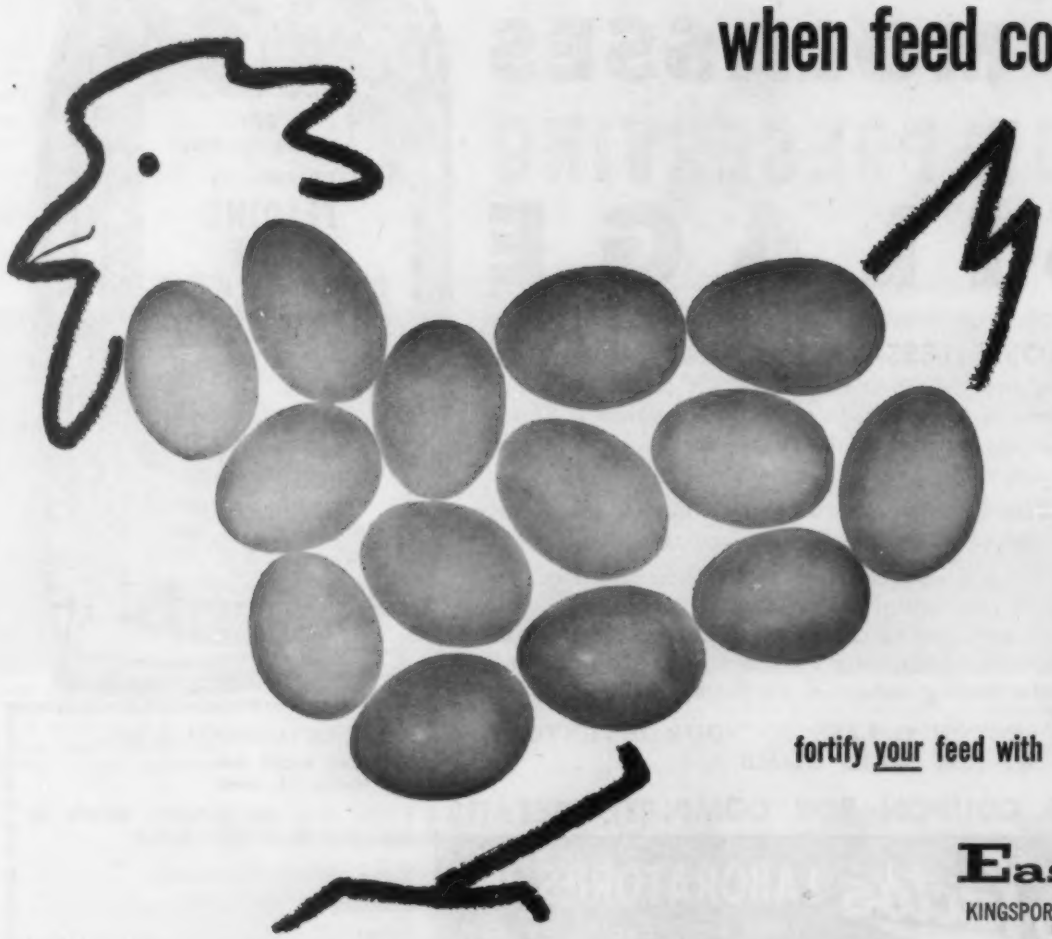

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NUTRITION

(Continued from page 21)

The data indicate that beef cows need not be maintained at levels above a strong thrifty condition. Liberal feeding had no beneficial effect on weaning weight and appears to have reduced useful life of the beef female and her reproductive performance. Considerable evidence from other species could be cited in support of these results. Alternate periods of summer gain and winter loss do not appear to be detrimental.

Since the cows on this project calved in late winter, and thus were suckling calves and re-breeding on good spring and summer pasture, companion studies were undertaken to determine the effects of low or high levels of supplemental feed on the performance of fall-calving cows, subsisting on weathered range grass (17). Table 4 summarizes four years' data with mature cows wintered on low (1.5 lb. cottonseed meal pellets per head daily) or high level of wintering groups (2.5 lb. cottonseed meal + 3 lb. grain). One-half of the calves were creep-fed.

Winter weight losses from fall (before calving) to spring were slightly more with the low level cows. This

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was reflected in lighter weaning weights of calves at 8 months, and a slightly reduced percent calf crop. As might be expected, creep-feeding was most beneficial where the cows were getting limited supplemental feed.

Costs

Total costs for feed and pasture of cows and calves, subtracted from actual market value of the calves, indicate that the high level of supplemental feed in this study was not profitable. It appears that the fall-calving cow on native range or poor quality roughage, nursing a calf and re-breeding, is more sensitive to differences in supplemental feed than the spring-calving female. Better results with creep-feeding calves whose dams were on the low level, as compared to the high, would point to the fact that it might be more efficient to feed the calf than the lactating cow.

Other trials with range cows have been conducted. All signs point to economy in supplemental feeding of the beef cow. The concept of the beef cow as a relatively inefficient producer who is able to make up for poor winter feed conditions on good summer grass seems justified.

Feeding the beef cow on good grass in an attempt to increase production has been disappointing. Young beef cows nursing calves have been supplemented with 5 lb. additional feed per head daily from July until their calves were weaned in October (18). This increased the body weight of the cows, but caused only an 11-lb. increase in calf weaning weights. In contrast, feeding a thyroactive compound in an attempt to stimulate greater milk flow during the late summer resulted in a marked weight loss in the cow, with only a slight increase in calf weaning weight (19). In other tests, mature cows have been full-fed corn for seven months prior to calving so as to increase body fatness in comparison to cows on normal fall and winter rations (20). Heavy feeding added 248 lb. per head to the weight of the cows; yet when both groups were placed on hay plus supplement after calving, the extra condition of cows fed excessively resulted in only 11 lb. more calf at 112 days of age.

Identical twins have been fed so as to gain normally during growth and pregnancy vs. receiving a full-feed of grain. Milk production of the twins fed excessively prior to calving has been less during first lactation. Recent studies at Virginia (21) point up the fact that rather wide changes in feed level of the dam may have little effect on weaning weight of calves.

Summary

While the needs of certain classes of beef cattle for protein and energy have been well established, little has been done to set the requirements of the growing beef female and the mature cow. Such requirements must consider the needs of the female during growth, early production, and on a lifetime performance basis. Results to date indicate that moderate to low rates of winter feeding during growth and pregnancy may be satisfactory—providing recovery is possible on summer pasture. Mature cows may withstand severe winter weight losses depending somewhat on time of calving. Evidence is accumulating that the beef cow responds poorly to liberal feeding during pregnancy and lactation, and that high planes of nutrition may reduce percent calf crop and shorten her useful life in the herd.

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Ag Research Center

SOUTH PASADENA, CAL.—Stanford Research Institute has established an agricultural research center under the direction of Dr. Harris M. Benedict, senior plant physiologist of the research organization. The center, which will be attached to the institute's Southern California Laboratories in South Pasadena will initiate and administer programs of benefit to western agriculture.

Dr. Benedict has been an institute staff member since 1950. Earlier he was associated with the U.S. Department of Agriculture for 15 years and with the Atomic Energy Commission.

WHICH IS THE CARB-O-SEP PEN?

Patent Pending

This pen received Product A—one of the prominent commercial products available for preventing blackhead.

Results at the end of the test period

Mortality due to blackhead 40% % severe liver lesions 45%
% severe cecal lesions 55% Feed conversion 3.29

This pen received Product B—another of the prominent commercial products available for preventing blackhead.

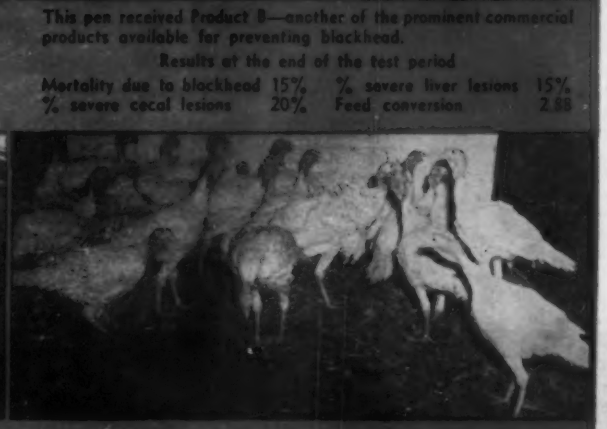
Results at the end of the test period

Mortality due to blackhead 15% % severe liver lesions 15%
% severe cecal lesions 20% Feed conversion 2.88

This Control Pen received no blackhead preventive product

Results at the end of the test period

Mortality due to blackhead 60% % severe liver lesions 60%
% severe cecal lesions 60% Feed conversion 4.16



This pen received CARB-O-SEP.

Results at the end of the test period

Mortality due to blackhead 0 % severe liver lesions 0
% severe cecal lesions 0 Feed conversion 2.35

—Abstracted From Test C-158

CARB-O-SEP AGAIN PROVES ITS SUPERIOR BLACKHEAD PROTECTION

The birds in each of the above pens are the same age—15 weeks. The same number of birds were started in each pen. They were raised under exactly identical conditions—except for the blackhead preventive used. The pictures and the statistical results convincingly prove the superior efficacy of CARB-O-SEP.

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Kent Feeds Names New Sales Trainees

Gary Ridout

Robert Cummings

MUSCATINE, IOWA — William Schafenacker, sales manager for Kent Feeds, Muscatine, has announced the appointments of Gary Ridout, Robert Cummings and Frank Clark as Kent sales trainees. They will undergo an extensive training period of several months in sales and service at the Muscatine home office and in the field.

Frank Clark

Mr. Ridout has been engaged in sales work in the Marshalltown, Iowa, area for several years. He is the son of Glen Ridout, Kent territory supervisor in the Iowa City, Iowa, area.

Mr. Cummings, a 1957 graduate of Iowa State College, was born and raised on a farm near Fairfield, Iowa, and Mr. Clark, a 1954 graduate of Iowa State College, joined the firm April 1 as a sales trainee. He had been a territory supervisor for the International Harvester Co. for two years.

North Dakota Expands Research with Lysine

FARGO, N.D.—Research with lysine in a barley-based swine ration is under way in the new, expanded facilities of the animal nutrition center of the North Dakota Agricultural Experiment Station.

Dr. W. E. Dinusson, animal husbandry department, who previously pinpointed lysine as a growth-limiting factor in swine, is expanding the research to determine just how much lysine must be added to a barley-based ration to provide the most profitable combination for the swine grower.

He is also adding various protein supplements, such as blood meal, meat scraps and soybean oil meal, to the ration in an effort to find a still more efficient and profitable feed combination.

Part of the work will be supported by a new $1,500 grant received by the animal husbandry department from Chas. Pfizer & Co. That company is also providing some of the lysine used in experimental work in animal nutrition.

The lysine studies are the first research actually under way in the facilities nearing completion at the nutrition center. Work with sheep will be expanded in the new location in the near future, and work with beef cattle will start this fall.

Equipment, including a complete pelleting mill, gift of the California Pellet Mill Co., San Francisco, is being installed to provide complete feed processing and mixing equipment for experimental rations.

Before completion of the nutrition center, swine feeding research on lysine had been carried on in the pens of the Sheppard Arena at such times as the building was not in use by school of agriculture classes.

JOINS STOCKTON EXCHANGE

STOCKTON, CAL.—The following companies have joined the Stockton Grain Exchange: Albers of Reno, Nev., and Dompe Warehouse, Crows Landing, Cal.

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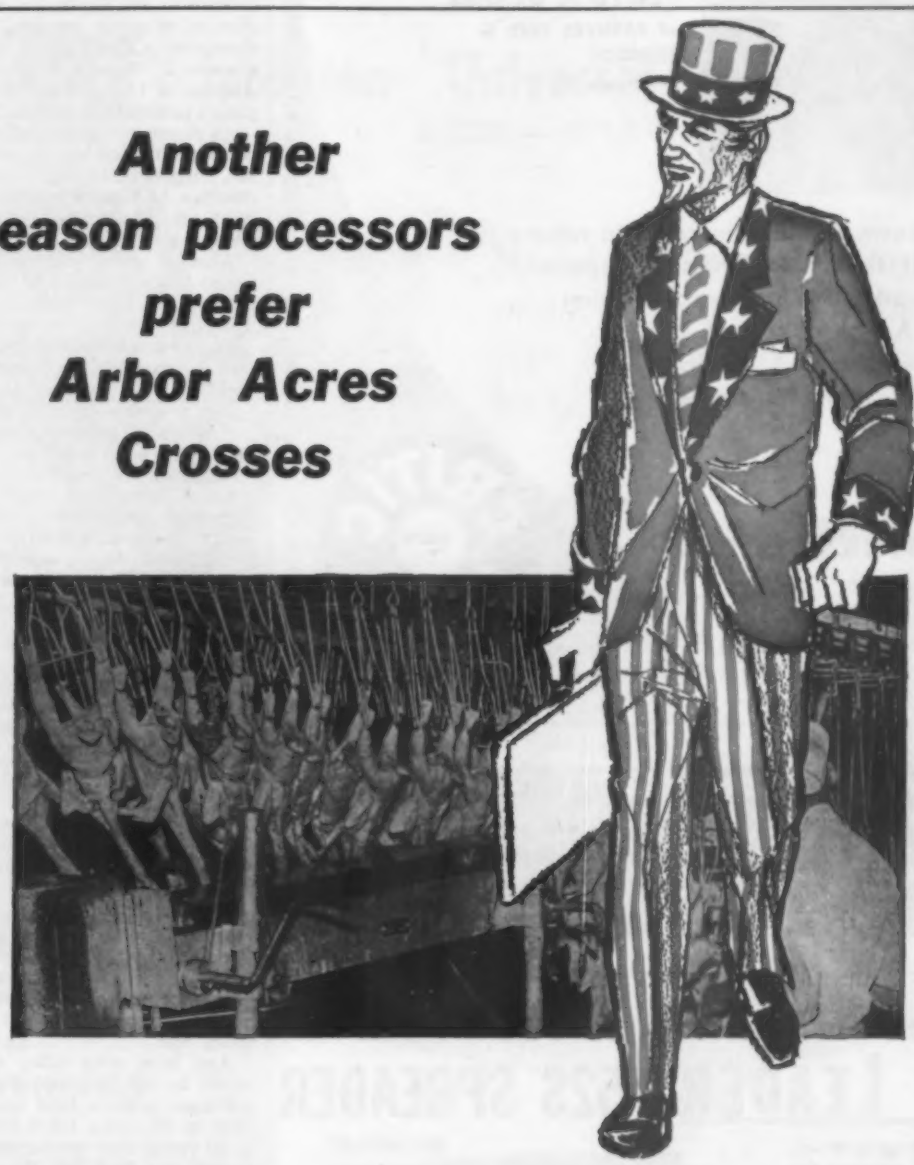

Mandatory federal inspection is here. From now on only the *best* birds will pay off. The Arbor Acres female first became famous as "the processor's bird" and this acceptance has increased each year. Marketing men prefer broilers from this great bird because they dress easier, their yield is consistently higher, their consumer appeal sells on sight.

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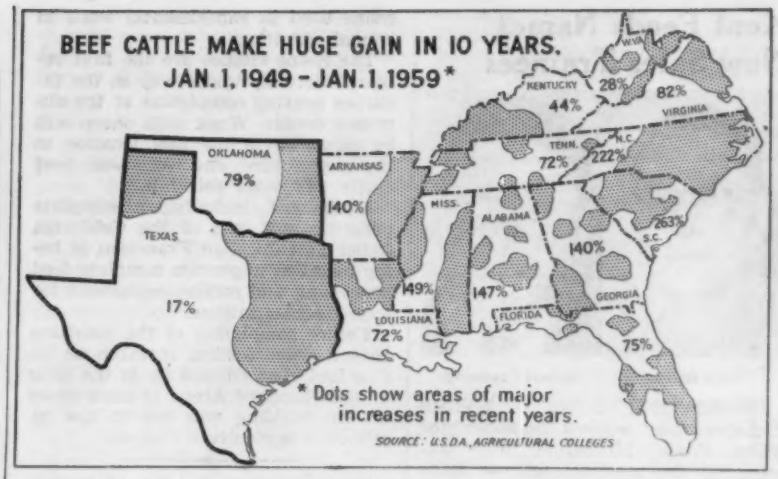

'Revolutions' in South Include Large Percentage Gains in Cattle Numbers

CHICAGO — "The future of agriculture in the South lies in the production of meat animals." This is a viewpoint expressed recently by Charles E. Hughes, livestock bureau, Armour & Co., Chicago, in the company's publication, Armour's Analysis.

"A complete metamorphosis in beef production" is on its way in the South, Mr. Hughes observed, and this change involves, to a lesser extent, the southwest central states of Texas and Oklahoma.

Acreage reductions of cotton, tobacco, cowpeas and other crops in the South have freed land for new uses. The shift has been mainly to hay and pasture—crops well suited to Dixie beef production and soil improvement.

Mr. Hughes reported that "statistics reveal a fantastic story of cattle increase, percentagewise." Beef cattle numbers in southern states, excluding Texas and Oklahoma, have increased 100% during the past 10 years compared with the U.S. average of 54%. North and South Carolina have shown increases of 222 and 263%, respectively. (See accompanying map.) From a numbers standpoint, Mississippi's gain is the largest —951 000 head.

Mr. Hughes noted that the South, excluding Texas and Oklahoma, now has 18% of the beef cattle numbers, compared with 21% for the "cattle states" of the West and 44% for the Midwest.

Indications of Trend

The meat animal influence in the South is evident when you consider such facts as these: Livestock dollar sales in Alabama exceeded row crop sales in 1957 for the first time in history. In Virginia 60% of the agricultural income is derived from livestock and 40% from crops, whereas these proportions were just the reverse 15 years ago.

And here are other trend facts noted by Mr. Hughes: Total area in southern pasture land has increased 11% in 10 years (1945-55) and 27% in 20 years. Hay production has gone up 13 and 50% for the same time intervals, respectively. Cattle virtually represent the sole outlet for these crops in most parts of the South.

Certain feed grains are on the upswing. In 10 years (1948-58), reported Armour's Analysis, grain sorghum production shot up 65% in the South, including Texas and Oklahoma. Soybean acreage for beans (excluding use as hay) has been climbing rather steadily, with a four-fold increase in 10 years. Although corn acreage has dropped, there has been a big increase in per-acre yield. Indications are that, in years ahead, corn will make a substantial gain in areas where soil and topography are congenial. Already, the value of the corn crop in Georgia for the past two years has topped the value of the cotton crop.

Significant, too, has been the improvement in the quality of southern beef cattle. For example, Florida cattle in 1929 were worth only 39% as much per head as the U.S. average. In 1957 the percentage was 68%. In 1929, Florida had only 10 purebred herds. By 1957, the number had jumped to 700.

"Door Wide Open"

Mr. Hughes commented, "The door is wide open for southern expansion. The population build-up on the Pacific Coast has widened beef outlets and the feedlots of California and nearby Arizona need more feeders than ever before.

"To the Corn Belt cattle feeder," he said, "these Pacific Coast developments bring difficulty in finding the kind of western cattle he wants, and they also mean higher prices. Because of this squeeze, he has been turning more and more to southern sources."

Mr. Hughes continued, "Most observers agree that an increase in cattle finishing in the South would be a boost to the economy. It seems illogical to ship feeder cattle to other areas for finishing and slaughter and then to return dressed beef to the area from which the feeders were obtained in the first place.

"Furthermore, the beef market is growing in the South, where population is increasing rapidly (and where) much beef is imported."

Cattle have been produced for two purposes in the South: (1) Stocker and feeder cattle for the Corn Belt and for regions farther west and (2) local feeding for slaughter.

Mr. Hughes noted that most of the feedlot finishing is done by larger-than-average farmers who have the necessary feed to carry them through to slaughter condition. An increasingly larger volume of finishing is being done by commercial and independent feedlots.

An increase in the number of commercial and independent feedlots has been noted all the way from western Texas to the Atlantic seaboard, with interest spurred by the specification buying of retail food store groups.

Dura-Buket Distributor

EAST ST. LOUIS, ILL — Dura-Buket division of the National Oats Co., East St. Louis, has announced that Ohio Belting & Transmission Co. will be the stocking distributor for Dura-Buket in a territory of 100 miles around Toledo, Ohio, and Ohio Transmission Co. will cover a 100-mile area around Columbus. The Ohio firms will handle and stock the plastic elevator bucket manufactured by Dura-Buket.

GMI STOCK DIVIDEND

MINNEAPOLIS—The board of directors of General Mills, Inc., Minneapolis, has declared a quarterly dividend of $1.25 per share on General Mills 5% preferred stock payable July 1, 1959, to stockholders of record June 10, 1959. This is the 79th consecutive quarterly dividend on General Mills 5% preferred stock.

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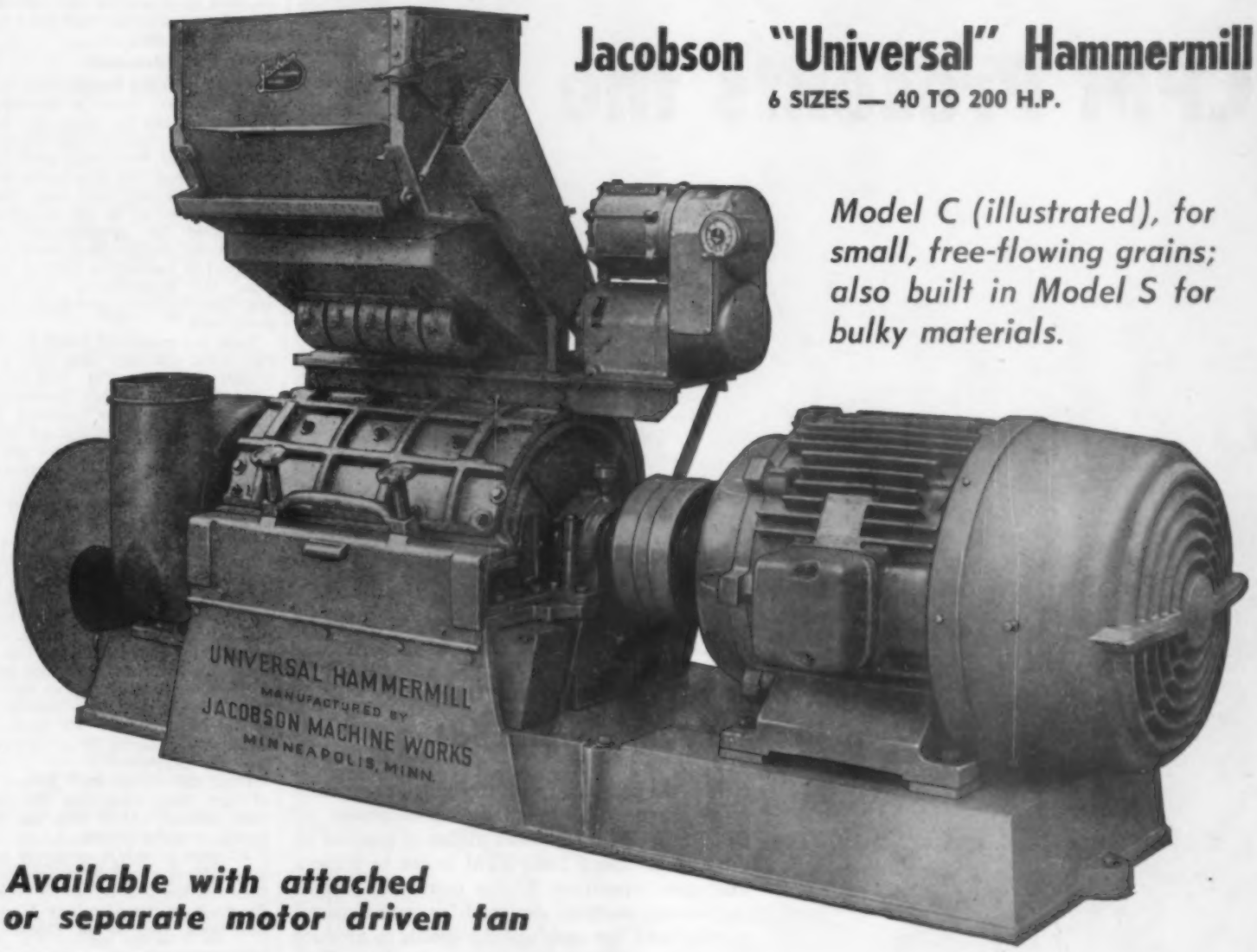

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beef cattle. For example, Florida cat-

General Mills 5% preferred stock.

Pelleting Improves Broiler Diets

By R. P. Mitchell and O. E. Goff
University of Tennessee

Pelleting of poultry feeds has become an accepted practice of feed manufacturers. Poultrymen favoring pellets list some of the advantages: Chickens can eat more pellets than mash in a short period of time; less feed will be lost from the feeders; pellets accidentally dropped in the litter can be recovered by the chickens; pellets increase the rate of growth and feed efficiency.

Poultrymen favoring mash state: Pellets cost more per 100 lb.; chickens consume mash easier; feed wastage from the troughs can be controlled by limiting the amount of feed placed in the hoppers; considering feed cost and broiler produced per pound of feed, the performance favors the mash.

EDITOR'S NOTE: R. P. Mitchell, assistant poultry husbandman at the University of Tennessee, and Dr. O. E. Goff, head of the poultry department at Tennessee, wrote the accompanying article, which appeared in Tennessee Farm & Home Science, publication of the Tennessee Experiment Station. It is a report of an experiment comparing pellets and all-mash in broiler rations.

Returns Per 1,000 Broilers Produced

Treatment	Protein	Feed Consumed	Feed Price Cwt.	Value of Feed Consumed	Chickens Sold	Market Value*	Income Over Feed Costs
	%	Lb.	$	$	Lb.	$	$
Mash	21	9675	4.23	409	3160	632	223
Pellets	21	9241	4.31	398	3430	686	288
Ground Pellets	21	8651	4.31	373	3170	634	261
Mash	25	8524	4.61	393	3290	658	265
Pellets	25	8426	4.78	403	3500	700	297
Ground Pellets	25	8441	4.78	403	3360	672	269

* Broiler price 20¢ per lb.

Published reports fail to provide conclusive evidence regarding the merits of pellets versus mash. Therefore a study was undertaken to compare mash versus pellets for broilers; to compare high versus low energy feeds for broilers at two protein levels; and to determine the economics of broiler production when fed a mash or a pelleted diet.

Procedure

A total of 1,800 broiler-type chicks were obtained from a commercial hatchery. At one day of age the chicks were sexed, de-beaked and vaccinated for infectious bronchitis and Newcastle diseases. The intraocular method of vaccination was used. Chicks classed as males by the sexer were toe-clipped for identification. Male and female chicks—50 of each—were assigned at random to each of the 18 pens. Six experimental treatments and three replicates of each treatment were used.

Each pen measured 10x15 ft. Litter was wood shavings. One 4-ft. water trough and three 4-ft. feed troughs were placed in each pen. Infrared heat lamps were used for brooding. Feed and water were provided ad libitum through the entire nine-week growing period. Records on feed consumption, mortality, and cause of death were collected. Chicks were weighed individually at nine weeks of age.

Two diets were used: One feed contained 21% protein with 920 calories of productive energy per pound, while the second contained 25% protein and 1,030 calories per pound. In each case, one ration was fed as a mash, a second was fed as pellets, while the third was made into pellets and then ground to the same consistency as the original all-mash diet. The pellets were ⅛ in. in diameter. All diets were mixed and pelleted by a commercial feed manufacturer.

Until the chicks were 3 to 4 days of age, they consumed the pellets with difficulty. After that, the chicks readily ate the pellets.

All pens of chicks receiving pellets weighed more at four weeks of age than did the lots of chicks receiving the mash or ground pellets. When the nine-week weights of chicks were

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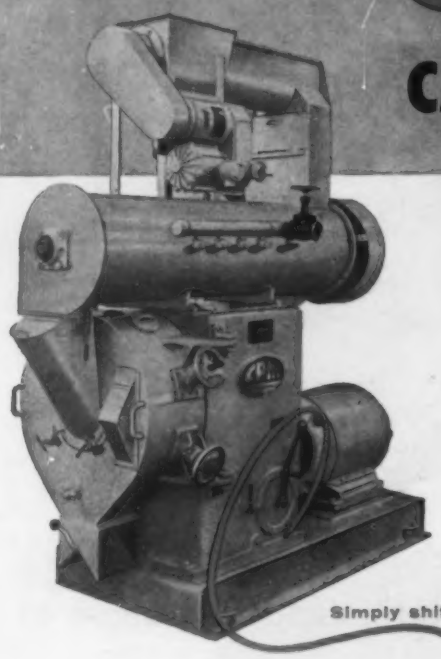

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analyzed—using analysis of variance according to Snedecor (1956) and applying Duncan's Multiple Range Test (1955)—it was found that the nine-week weights of chicks fed the diet containing 25% protein and 1,030 calories of productive energy per pound of feed were significantly greater (at the 5% level of probability) than weights of chicks receiving the 21% protein diet. The weights of chicks receiving pellets were significantly greater than those fed mash. The effects of the high-protein and high-energy diet and pelleting were additive. The chicks fed the pelleted, high-protein, high-energy diet were significantly heavier at nine weeks of age than were the chicks receiving any of the other treatments. (See Figure 1.)

The diet containing 21% protein and feed as an all-mash or as ground pellets was significantly inferior to the other treatments when measured in terms of nine-week broiler weight. The broilers fed ground pellets as a mash failed to produce gains equal to the broilers fed the same diet as pellets.

Significant differences between the growth rate of chicks fed the all-mash and those fed the ground pellets were not found. There was a highly significant difference in the growth response of chicks receiving pellets and those receiving ground pellets in favor of the chicks receiving the pellets.

The feed efficiency of the all-mash diet containing 21% protein was significantly inferior to all other treatments when measured in pounds of feed per pound of live broiler weight. The pelleted diet containing 25% protein and high in energy was significantly superior to the 21% protein diet fed—either as all-mash or as ground pellets—when measured in pounds of feed required to produce a pound of live broiler.

When feed consumption, feed price, and market value of broilers produced were used as criteria and converted to income over feed cost, the economic returns favored the high-energy, high-protein diet fed in pellet form. The income over feed costs per 1,000 broilers sold was greatest for those lots fed pelleted feed and least for those lots fed an all-mash diet. On the basis of these data it paid to use pellets, although the price per 100 lb. was greater than the price of mash. Income over feed costs was increased even more when the high-protein, high-calorie diet was fed. (See table.)

Summary

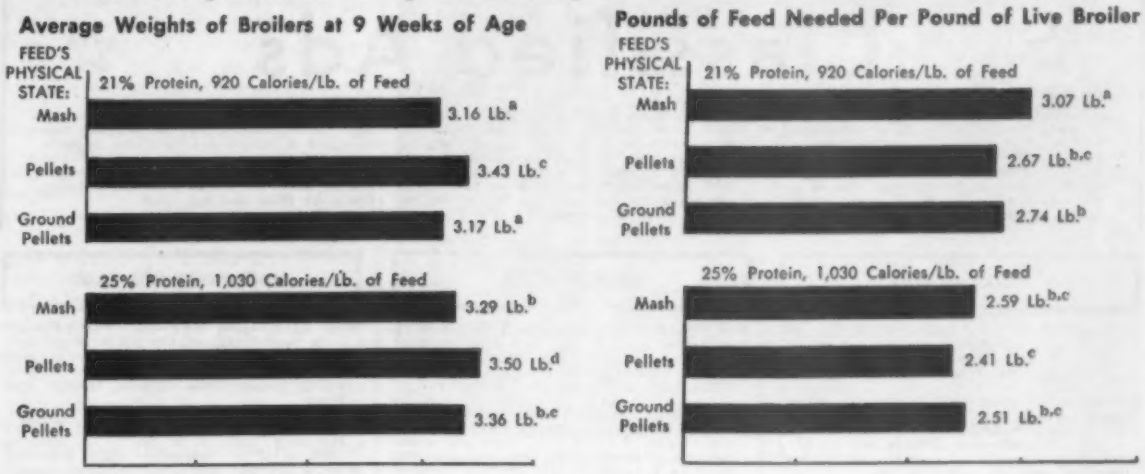
1. Diets containing 21% protein with 920 calories of productive energy per pound and 25% protein with 1,030 calories per pound of feed were fed to broiler type chicks from one day of age until marketed at nine weeks of age.

2. Chicks fed the pelleted, high-protein, high-energy diet were significantly larger at nine weeks of age and gave a greater return over feed cost than did any of the other treatments.

3. Pelleting of the diets improved the growth rate and feed efficiency of broilers.

4. Grinding of a pelleted broiler diet failed to significantly improve growth rate or feed utilization of broilers over the non-pelleted diet.

FIGURE 1. Weights of broilers bearing the same subscript—a, b or c—are not different, one from the other.



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Late-Maturing Pullets Produce More Eggs

NEW YORK — The longer pullets are kept from the beginning of egg production, the better their output will be, according to recent experiments conducted by the agricultural department of Reading University, England, and reported by the New York office of the British Information Service.

Sexual maturity in the experiments was delayed by a program of reducing light after starting the chicks on 24 hours of light per day.

Six hundred pullets, Rhode Island Reds crossed with Light Sussex—all hatched on the same day—were used in the experiment. Half of them had natural nights and days. The other half had artificial as well as natural light for the first week, making "days" 24 hours long.

The days were then shortened by 35 minutes each week until they were cut to 14 hours and five minutes after 17 weeks. From that time on, both groups had natural nights and days.

Maturity, and the laying of the first egg, were delayed by 24 days in the case of the light-controlled group; but at 30 weeks pullets in this group weighed more than their normal counterparts. And while they had laid the same number of eggs, the report said, the light-controlled group produced almost double the number of large eggs, 50% more medium-sized eggs and one half the number of small eggs.

At 56 weeks, the light-controlled group had laid 135 eggs, compared with the "normal" group's 126, and at current packing station prices, each experimental bird had produced eggs worth $6.71, compared with $5.69 for the controls.

LOUISIANA POULTRY FIRM

BATON ROUGE, LA.—The office of the secretary of state has issued a charter of incorporation to Rite-Way Chix, Inc., Shreveport, La., to engage in poultry and hatchery business. Incorporation is for 500 shares of no par value.

Researcher Outlines Nutritional Factors In Albumen Quality

COLLEGE PARK, MD.—Evidence that certain nutritional factors may influence egg quality as measured by the percentage of thick albumen or Haugh unit score was presented by a University of Maryland graduate student in a recent issue of "Information for the Maryland Poultryman," a publication of the Maryland Extension Department.

Kenneth M. Hall, graduate student in poultry, cited research from Maryland and other experiment stations regarding this problem.

He pointed out that a seasonal decline in egg quality begins in March or April and continues throughout the summer months. Increasing age of the birds and warm weather have often been cited as causative factors. Some of the known factors which influence albumen quality during the laying year, he said, are diseases, high environmental temperatures, breed and strain differences, natural feed ingredients and certain drugs.

"Until recent years," he said, "it was believed that the character of egg albumen was not affected by nutritional factors. However, diets containing high proportions of corn, wheat or oats were reported as early as 1934 to cause a decrease in the percentage of thick albumen."

Work at Pennsylvania State University, Mr. Hall continued, showed that eggs from a barley-oats-meat scrap diet had significantly higher Haugh unit scores than eggs from a corn-soybean oil meal diet. Diets high in oats, barley and meat scraps resulted in eggs with more thick albumen than diets high in corn and soybean oil meal.

Scientists at Ontario Agricultural College found that .005% 4-hydroxyphenylarsonic acid in the feed lowered egg quality, while the addition of 2½ and 5% fat had no effect.

Colorado Agricultural Experiment Station reported that albumen quality was improved at high ambient temperatures, when three, five or 10 mg. of ascorbic acid (vitamin C) were added per pound of feed. When 20 mg. per pound were added, this improvement disappeared. Colorado workers also reported no differences in egg production or Haugh units when rations with 11, 13, 15, or 17% protein were fed. At the University of Maryland, hens fed low protein rations consistently laid fewer eggs having a higher albumen quality than hens fed higher protein levels. These results may be explained easily since there is known to be a negative correlation between egg production and Haugh unit score, Mr. Hall said.

He cited other research at Maryland which showed that hens fed rations supplemented with ammonium chloride laid as many eggs with more thick albumen, higher Haugh unit scores and higher percentage of AA quality eggs. After four weeks storage at 50° F., 20% of these eggs were still AA quality and 80% were A quality. When eggs produced from control hens were similarly stored there were no AA quality eggs, 50% were A quality, and 50% were B quality. Unfortunately, the use of ammonium chloride in practical feeds cannot be recommended as it markedly reduces shell thickness.

"It is obvious, then, that certain nutritional factors can affect albumen quality," Mr. Hall said. "Also, it is apparent that there is not complete agreement among researchers, and that this field of knowledge is by no means complete."

Scientists Say 40% of Mastitis Can Be Cured

ST. PAUL—A third or more of the mastitis in Minnesota's dairy herds could be cured with antibiotic treatment, if dairymen used the treatment properly and wherever it is needed, according to scientists at the University of Minnesota's College of Veterinary Medicine.

The scientists have confirmed studies from other states showing that the streptococcus form of mastitis can be eliminated with antibiotics now available. This form of mastitis accounts for between 30 and 40% of all mastitis in the state.

Staphylococcus mastitis, the most common other type, cannot be eliminated with antibiotics, although treatment will cure it temporarily in a third of the cases. Staphylococcus is the current problem in mastitis research.

"Staph" mastitis is usually more acute and more often kills cows than does the "strep" form, according to the scientists, Drs. K. I. Loken and H. H. Hoyt. In some herds the two researchers have successfully treated cows infected with staph mastitis, only to have the ailment show up again in the same cattle a week or two later. However, this temporary relief is sometimes enough to save the life of a cow with an acute case.

Dr. Loken and Dr. Hoyt have found that where a farmer raises his own replacements, the cause can usually be traced to a single type of organism. This, of course, helps simplify the treating problem, since different forms require different types of treatment.

What this means is that a farmer cannot always completely stamp out this disease, but he can in many cases reduce the infection to a considerable extent.

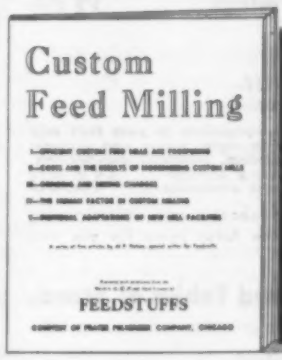
In mastitis control, the researchers suggest the following, based on current knowledge:

"1. Keep a close watch on individual cows. Those with swollen or inflamed udders or flaky milk should be milked last. This can help prevent spreading the infection from one cow to another.

"2. Dip the teat cups in a disinfectant solution between each milking. This also helps keep down spreading of infection.

"3. When mastitis occurs in a herd, call the veterinarian. If the streptococcus form is what's causing the trouble, every infected cow in the herd must be detected. Proper treatment with antibiotics can virtually eliminate the problem."

FUN FOR EVERYBODY — Commercial Solvents Corp.'s animal nutrition department booth at the American Feed Manufacturers Assn. convention in Chicago featured a puppet show that provided fun as well as education. This photo shows a group of youngsters from Chicago's Hull House watching a special Mother's Day show staged by Murray Bunin, puppeteer, who also ran several showings during the convention of a commercial script featuring CSC's Baciferm.



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POULTRY

(Continued from page 1)

business assembly line because they are in debt to suppliers and have no choice but to work it out, at a piecework wage. And, now the agri-business promoters will proceed with a deadly game of cannibalism until a 'Big Four' or 'Big Five' emerges to settle the poultry industry down to sanity . . . The officials now running USDA turned a deaf ear to family farmers, listened to the agri-business promoters and now say, in effect, that the federal government will not lift a finger in this current poultry crisis."

Second Statement

In another statment, Rep. Brown said: "I feel strongly that the present dried egg purchasing program will not bring any measurable relief; while an intensive merchandising program for eggs is a commendable effort, we feel that additional merchandising efforts alone will not be sufficient to combat this economic disaster . . . I find it difficult to understand why USDA is reluctant to initiate a poultry product removal and diversion program . . . I hope the House Agriculture Committee will renew its demands for an effective purchase and diversion program."

He also said he hoped the agriculture committee would schedule action on new legislation which would direct the secretary of agriculture to initiate a laying fowl and replacement hatching egg diversion and removal program, to initiate a school lunch broiler purchase program this fall, and to direct CCC to initiate a turkey purchase program for re-sale in export markets.

Rep. Brown said his sub-committee had approved his letter to FTC requesting the commission to advise "whether, under existing law, we may expect fruitful action directed toward preventing monopoly conditions in the poultry industry."

"We have also suggested," he said, "that in the event the commission should conclude that existing laws are inadequate to deal with these problems, it advise Congress at the earliest possible date what should be done in the way of new legislation to deal with matters of this kind."

Rep. Brown said that after receipt of this information from FTC and after further hearings before the House Agriculture Committee and a food industries sub-committee of the Small Business Committee, his sub-committee will make further recommendations "on the long-range aspects of the poultry industry's problems."

Department of Justice

Rep. Brown pointed out that the report on the hearings his sub-committee conducted two years ago had been turned over to the anti-trust division of the department of justice. Subsequently, he said, he received a letter from the anti-trust division which said, in part, "From our examination of the material contained in the report and transcripts, it does not appear that the growth of 'integration' and contract growing raise substantial questions under the Sherman Act. The material contained in the transcripts tends to support the conclusion that the broiler industry has been suffering from over-production, not lack of competition. Apart from the Sherman Act, however, the Federal Trade Commission may wish to appraise the results of your sub-committee's inquiry from the standpoint of possible Robinson-Patman Act violations."

This week, Congressman Brown wrote to the FTC chairman, enclosing records from the previous hearings. In this letter, he said, in part: "Already suppliers and processors have virtually taken over the broiler industry, eliminating the independent enterpriser, and the 'broiler pattern' is said to be the prototype for future developments in eggs, turkeys and livestock." He also mentioned "tremendous concentration of economic power possessed by the major food chains."

"Is this not a trend toward monopoly conditions?" Rep. Brown asked FTC.

AFMA

(Continued from page 1)

and unexpected results have occurred."

Following is the text of the AFMA statement:

"The American Feed Manufacturers Assn. agrees with the basic principles of the Food Additives Amendment as a proper step in the program of the Food and Drug Administration to protect the public from unsafe food additives. It recommends that the following principles be considered by the Food and Drug Administration in carrying out the intent and purposes of the Food Additives Amendment of 1958 to the Federal Food, Drug and Cosmetic Act:

"1. Responsible companies interested in the research and development of new feed additives should be encouraged, in view of the large outlay of capital necessary, that the scientific data developed and evidence presented as to the safety and efficacy of new feed additives will be subject to moderate, reasonable consideration and review. Decisions should be based on the judgment of well-trained capable scientists that have an appreciation of industry problems as well as a keen sense of responsibility and a genuine interest in protecting and promoting the welfare of the general public. Moderate and temperate enforcement of this new amendment can spark great scientific development whereas tough enforcement can stifle the progress of animal agriculture, public health, and food production.

"2. In cases where well-established drugs, after thorough investigation, have been cleared and widely used in feeds prior to the Food Additives Amendment of 1958 such clearance should not be revoked unless experience shows that serious and unexpected results have occurred.

"3. If a drug can be administered either orally, by implantation, or injection there should be no discrimination as to the route of administration.

"4. The Food and Drug Administration should not withhold clearance of a new feed additive when the manufacturer has produced ample evidence, based on animal and clinical investigation that the drug is safe when used at the level indicated on the label and is used in accordance with complete and adequate feeding directions, accompanied by any warnings deemed necessary."

Leo D. Crocker Dies

WARRENSBURG, MO.—Leo Dow Crocker, 64, territory sales manager in western Missouri for Nutrena Mills, Inc., for 30 years, died unexpectedly May 31 at home here. He was born in Strasburg, Ill., and had lived in Warrensburg 26 years. In his career with Nutrena, Mr. Crocker spent all his time in the western Missouri territory with the exception of about a year when he was in Minnesota on a special turkey project back in the 1930's. In the southwest region, he was the employee with the longest record of service.

Charters Granted

TOPEKA — Rusco, Inc., a Salina feed dealership, and Frain Spouting & Elevators of Kansas, Inc., Hutchinson, have been granted charters. Capitalization of $100,000 has been authorized for each firm.

J. J. Vanier is resident agent for the Salina firm and Charles E. Rauh is resident agent for the Hutchinson firm formed to manufacture and sell grain elevator equipment.

TOP OF THE HOPPER

(Continued from page 2)

in Nebraska, although the number of birds involved was not large—from 4.7 million to 2.3 million.

The trend in New England is mixed. While Maine more than doubled her production, next-door-neighbor New Hampshire showed an increase of only 8% and Massachusetts showed a decrease of 10%.

Comments Mr. Gannon: "What will the future bring? That is the big question. Will the southern states be able to maintain their poistion in the broiler industry? We think so, but it is not as easy as it sounds. Nearness to market, feed prices, management and efficiency of production are the factors to be considered. Those areas that can produce quality broilers most efficiently and place them on the market at the lowest cost are the areas that will survive."

A midwestern feed manufacturer is placing 25,000 laying chickens in each of four houses, partly for research and partly for production.

Another midwestern feed firm is testing on a limited scale a plan to pay egg producers a 1¢ doz. bonus for all grade A large eggs. The producers market their eggs through regular channels, such as produce buyers. Then, if they use the feed company's feed, they receive from the feed firm the 1¢ extra payment on all eggs certified by the egg buyer as meeting the required quality. Under this plan, the feed firm does not itself become involved in any egg programs, but it does aim at encouraging production and marketing of quality eggs, plus use of its feed.

THE RENEWED EFFORTS to change grain trading from a bushel to a weight basis (Feedstuffs, May 16), led by the National Association of State Departments of Agriculture, is not likely to meet less opposition from certaint potent segments of the grain trade than did the previous efforts led by the feed industry's purchasing agents.

What might be considered as a tentative torpedo was fired by Pete Stallcop, secretary of the Northwest Country Elevator Assn. and the Minneapolis Terminal Elevator Assn., in a bulletin to members last week. Pete comments on the appointment of a committee representing 12 national organizations to work toward weight trading (including the AFMA) as follows:

"Why wasn't the Terminal Elevator Grain Merchants Assn., which represents almost all of the terminals in the U.S. on the list? One also wonders why the large exchanges—such as Chicago, Kansas City and Minneapolis—were not on the list? While it is true that the National Grain Trade Council (on the list) is made up principally of exchanges, it so happens that neither Chicago nor Kansas City are members of the NGTC."

Pete guesses that if a vote were taken today on the question, the organizations on the committee would probably vote about 9 to 3 in favor of the hundredweight. "Oh, well, if the odds are 3 to 1, it will at least be a reasonably interesting fight," he concludes.

REP. CHARLIE BROWN, the poultry industry investigator, has trained his guns on integrated operators in a formal request that the Federal Trade Commission assist his subcommittee in its "search for ways and means of applying our anti-monopoly laws to help preserve a fair and competitive enterprise system in the poultry industry." Earlier, the anti-trust division of the Department of Justice turned down the subcommittee's request to study the legality of integration practices. The assistant attorney general at that time wrote: "From our examination of the material contained in the report and transcripts, it does not appear that the growth of 'integration' and contract-growing raise substantial questions under the Sherman Act."

Rep. Brown urges that the FTC give the matter its earnest consideration and suggests that if existing laws are inadequate to deal with the situation, FTC should advise Congress what should be done about new legislation.

The Brown subcommittee plans to investigate chain store pricing practices in hearings starting June 18.

Feedstuffs Washington correspondent, John Cipperly, observes that Rep. Brown, a political affiliate of Presidential Aspirant Stuart Symington (D., Mo.), is about to get some competition from Rep. Lawrence S. Smith (D., Wis.) who may be suspected as supporting another presidential hopeful, Sen. Hubert Humphrey (D., Minn.). Rep. Smith heads the House subcommittee on poultry and eggs, and it is planning hearings in mid-June, too.

Picking out the political shells from the scrambled egg situation is done most skillfully by Mr. Cipperly, a shrewd observer of the Washington frying pan: "The New Jersey egg producers appear to be having too many friends from foreign areas. It is interesting to note that the Smith investigation of the poultry-shell egg market is not scheduled before June 16-17 at which time the spring flush production will have passed its peak. Shell egg prices may be higher at about that time, and consequently Mr. Smith may look very good to the egg producers in New Jersey. Charlie Brown may be a step off the presidential pace."

Not all governmental problems are confined to Washington. It has recently been brought to the attention of Minnesota feed men that appropriations from the state legislature for feed and fertilizer inspection fall far short of the fees collected for such inspection. In 1957, $183,000 was collected and $72,528 was spent. Fees collected go into the general fund and the department's budget is allocated by the legislature. Reaction of some feed men is that the industry is willing to pay the fees, but that they should probably be reduced to yield a sum necessary to maintain inspection services and not fall into the category of a general tax. A similar problem exists in Missouri and probably other states as well.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

A AND D FEEDING OIL

Boston: Demand fair; supply adequate; 600 D, 1,500 A 17½¢ lb.; 300 D, 2,250 A 18¢; 300 D, 1,500 A 16½¢; 300 D, 750 A 14¾¢; 400 D, 3,000 A 20¢; 300 D, 3,000 A 19½¢; 75 D, 750 A 14½¢.

New York: Demand fair; trend steady; supply limited; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 13½ @15½¢, 1,500 A 15½@17¢, 2,250 A 17½@ 20¢, 3,000 A 19@21¢; 600 ICU, 1,500 A 16@ 18¢, 2,250 A 18@19½¢; f.o.b. Massachusetts, New York or Pennsylvania.

Chicago: Demand fair; trend steady; supply ample; straight A feeding oil, with 10,000 units vitamin A per gram, 7@7¼¢ a million units of vitamin A, l.c.l., packed in 55-gal. drums, f.o.b. Chicago, drums included.

Minneapolis: 10,000 A 35¢ lb.; 300 D, 2,250 A 20¢ lb.; 300 D, 1,500 A 18¢ lb.; 300 D, 750 A 16½¢ lb.

Denver: Demand fair; trend steady; supply ample; 300 D, 2,250 A 22¢ lb.

ALFALFA MEAL

Kansas City: Demand mediocre; trend steady; supply adequate but not pressing; there is very little forward selling, most buyers ordering only what they need and sellers not pressing them for bookings; production is spotty, running even with or ahead of last year in some areas and well under a year ago in other areas; dehydrated alfalfa meal with 17% protein and 100,000 units vitamin A guaranteed on arrival—regular meal $45, reground pellets $47, greased meal $49, sacked; pellets $40 @42, bulk, blenders at the higher level and those who cannot process pellets at the lower level; 18% protein, 125,000 units A meal $52, sacked; suncured demand has been fairly good and supplies are very tight since most processors are now dehydrating and warehouse stocks have proven inadequate, No. 1 fine ground $39, No. 1 ¼-in. $37, No. 2 ¼-in. $34, sacked.

Omaha: Demand good; trend steady; supply ample; 17% dehydrated, 100,000 A units, bulk pellets $40; sacked meal $45, all Omaha basis.

Portland: Demand good; supply ample; trend unchanged; suncured, 15% $42; dehydrated $63.50.

Ft. Worth: Demand good for dehydrated, fair for suncured; supply sufficient on dehydrated, limited offerings on suncured; new crop Texas production, 17%, 100,000 A $54; bulk pellets $50; suncured, 13% ¼-in. grind No. 1 $40.

Cincinnati: Demand poor; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $61.50@63.50.

New Orleans: Demand fair; trend steady; supply light; vitamin A, 17% $64@65; pellets $62@63.

Chicago: Demand very light; trend sharply lower; supply good; 17% protein, dehydrated, with 100,000 units vitamin A guaranteed $51.50, carlots; suncured, 15% protein, no quotes.

Philadelphia: Demand and supply fair; trend unsettled; 17% dehydrated $69.

Los Angeles: Demand fair; trend unchanged; supply adequate; dehydrated meal, 17% protein, 100,000 A $50, bulk; dehydrated pellet meal, 17% protein, 100,000 A $53, bulk; suncured meal, 15% protein $42@ 43, bulk; suncured crumbles, 15% protein $44@45, bulk.

Boston: Demand slow; trend easier; supply plentiful; dehydrated, 17% $63; suncured, 13% $44@45.

Buffalo: Demand poor; trend steady to lower; supply adequate; $65, Boston.

Denver: Demand fair; trend weak; supply ample; dehydrated $39.

Minneapolis: A sharp downturn occurred during the past week as heavy production returned to reduce prices by $8. Fair demand; ample supply; 17% protein, 100,000 units of vitamin A reground pellets $50; oiled reground $52.

Seattle: Demand fair; trend firm; supply good; 15% protein suncured $48, truck loads; 136,000 A unit dehydrated $69, truck loads.

Memphis: Demand fair; trend weaker; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $53.

ANIMAL FAT (STABILIZED)

Kansas City: Demand slow; supply ample; trend steady; prime tallow 6¾¢ gal., tank car.

Ft. Worth: Demand good; supply rather tight; prime tallow, tank cars 6¾@7¢ lb.; drums 8¾@8½¢ lb.; f.o.b. north Texas packing plants, with returnable drums.

New Orleans: Demand fair; trend steady; supply adequate; 7@7½¢ lb., tank cars.

Chicago: Demand steady; supply fair; bleachable fancy tallow, tank, truck or car lots $7 cwt.; yellow grease $6.75 cwt., tank, truck or car lots.

San Francisco: Demand fair; supply ample; bleachable fancy 7⅝¢ lb.; yellow grease 6⅞¢ lb.

Boston: Demand fair; trend easier; supply steady; tallow 7⅛¢ lb.; yellow grease 6⅞¢ lb.

Louisville: Demand dull; trend weak; supply good; all items off ⅛¢ lb.; bleachable fancy 6⅞¢ lb.; white tallow 7⅛¢ lb.; yellow grease 6⅛¢ lb.

Atlanta: Demand fair; trend steady; supply barely ample; 6⅝¢ lb., bulk, f.o.b. Georgia and Alabama producing mills.

St. Paul: Market firm at 6⅛¢ lb., f.o.b. producer's plant for bleachable fancy tallow; improved export demand took place this week; feed demand good; supply barely ample locally.

BARLEY FEED

San Francisco: Demand fair; supply ample; rolled $57; ground $56.

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

Portland: Demand slow; supply ample; trend lower; rolled $62; ground $60.

Boston: Demand slow; supply good; $44 @45.

New Orleans: Demand slow; trend unchanged; supply ample; $62@63.

Baltimore: Demand slow; trend easier; supply fair; $45.50, carlots.

Ogden: Supply average; rolled $52@57; whole barley $44@49.

Philadelphia: Demand slow; supply fair; pulverized $50.

Los Angeles: Demand slow; trend unchanged; supply ample; standard rolled $2.90 cwt.; standard ground $2.90 cwt.

Chicago: Demand slow; trend easier; supply ample; $35, carlots.

Seattle: Demand fair; trend steady; supply good; $51, bulk, truck lots.

Milwaukee: Demand good; supply fair; needles 84¢@$1.07 cwt.; ground screenings $28, sacked, Milwaukee.

BENTONITE (SODIUM)

Denver: Demand fair; trend good; supply ample; $23.

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: 80 granular $31.50; 200 mesh fine $31.

Chicago: Demand steady; trend firm; supply adequate; f.o.b. Wyoming and South Dakota shipping points: granular, 30 mesh $16.50; fine granular, 50 to 100 mesh $13.75; powder, 200 mesh $13.50, f.o.b. Belle Fourche, S.D., minimum 30-ton carlots, 80 granular $13.50 net; 200 mesh, fine $13.25 net.

BLOOD FLOUR

Louisville: Demand dull; trend very weak; supply good; $80@85.

BLOOD MEAL

San Francisco: Demand good; supply tight; $7.25 a unit of ammonia.

Portland: Demand slow; supply ample; trend unchanged; $135.

Ogden: Supply average; $110 in 100-lb. bags, f.o.b. Ogden.

New Orleans: Demand fair; trend unchanged; supply normal; $120@125.

Los Angeles: Demand slow; trend weaker; supply ample; $6.75 a unit of ammonia.

Chicago: Demand and supply fair; trend easier; guaranteed 80% protein, 100-lb. bags $130.

Louisville: Demand slow; trend weak; supply good; $80@85.

BONE MEAL (STEAMED)

Boston: Demand and supply steady; $90.

San Francisco: Demand good; supply ample; $75.

Ft. Worth: Demand good; supply light; $90, f.o.b. Ft. Worth, local manufacture.

Portland: Demand slow; supply ample; trend unchanged; $102.

Los Angeles: Demand fair; trend unchanged; supply adequate; imported $78 in 20-ton lots.

Cincinnati: Demand fair; trend steady; supply ample; $100, Cincinnati.

New Orleans: Demand slow; supply light; trend steady; $105@110.

Chicago: Demand fair; trend steady; supply adequate; in 50-lb. bags $105, carlots.

Louisville: Demand dull; trend weak; supply light; $75@80.

Denver: Demand good; trend firm; supply limited; $103.20 ton, 20-ton car, Denver.

Seattle: Demand good; trend firm; supply limited; $89, truck lots.

BREWERS DRIED GRAINS

Cincinnati: Demand poor; trend steady; supply adequate; $52.

Boston: Demand cautious; distress lots unsettling; 22% $50.50@51; 26% $51@52.50.

Ft. Worth: Demand fair; supply sufficient; 26% protein $50, June.

San Francisco: Demand fair; supply ample; $54.

Los Angeles: Demand fair; trend unchanged; supply adequate; $49.50 bulk, $53.50 sacked.

New Orleans: Demand fair; trend steady; supply good; $50@51.50.

Philadelphia: Demand and supply fair; $51.50.

Chicago: Demand light; trend steady; supply good; 26% protein $44.50@45, carlots.

Louisville: Demand slow; trend steady; supply good; $45.

Buffalo: Demand poor; trend lower; supply adequate; $41.50, bulk, Boston.

Milwaukee: Demand good; supply fair; $46.50.

BREWERS DRIED YEAST

Boston: Demand and supply steady; 11¢ lb.

Omaha: 10½¢ lb.

San Francisco: Demand fair; supply good; 10¢ lb.

Portland: Demand good; supply ample; trend unchanged; 8½¢ lb.

Los Angeles: Demand fair; trend steady; supply adequate; 10¢ lb. in 5-ton lots; 11¢ lb. in 1-ton lots; 12¢ lb. in less than 1-ton lots.

Chicago: Demand good; trend steady; supply fair; $9.50@10.50 cwt., carlots; $9.75 @12.25 cwt., l.c.l.

Denver: Demand light; trend steady; supply ample; 9¢ lb., f.o.b. Golden, Colo.

Louisville: Demand slow; trend steady; supply good; 10@10½¢ lb.

Buffalo: Demand fair; trend steady; supply ample; $10.35 cwt.

Seattle: Demand slow; trend steady; supply ample; $12 cwt.

St. Louis: Demand fair; trend steady; supply adequate; carlots 9½¢ lb.; ton lots 10½¢ lb.; less than ton lots 11½¢ lb.

Milwaukee: Demand good; trend steady; supply fair; carlots 10@11¢ lb.; l.c.l. 10½ @12½¢ lb.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

BUTTERMILK-CONDENSED

Philadelphia: Demand slow; supply light; $4.25 cwt.

Ogden: Supply normal; $4.40, 100-lb. drum.

Wichita: Demand slow; supply good; $2.90 cwt. in barrels.

Boston: Demand slow; supply improved; 3½¢ lb.

San Francisco: Demand fair; supply good; $5 cwt.

New Orleans: Demand dull; trend steady; supply normal; $4.25@4.30 cwt.

Los Angeles: Demand slow; trend unchanged; supply adequate; 5½¢ lb. in 100-lb. lots; 4½¢ lb. in 500-lb. lots.

Chicago: Demand quiet; trend steady; supply good; $3.25@3.50 cwt., carlots.

Louisville: Demand dull; trend weak; supply nil; $4.25 cwt., nominal.

CALCIUM CARBONATE

Cincinnati: $8@9 cwt.

Los Angeles: Demand slow; trend unchanged; supply ample; $10.25.

Chicago: Demand steady; trend firm; supply adequate; fine grind, plain, 100-lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.04; granular grind $1 premium.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

Minneapolis: Fine grind, 50-lb. bag $12.25, 100-lb. bag $11.50; bulk, boxcar $10; bulk hopper $9.50; coarse grind $1 premium, delivered Minneapolis.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight)

New York: Crystals $15.28, flour $10.28.
Buffalo: Crystals $16.11, flour $11.11.
Toledo: Crystals $17.96, flour $12.96.
Boston: Crystals $16.53, flour $11.63.
Limecrest, N.J.: Crystals $10.50, flour $5.50.

CHARCOAL

San Francisco: Demand steady; supply ample; $141.

Los Angeles: Demand slow; trend unchanged; supply ample; hardwood poultry $156 in less than ton lots; $144.40 in ton lots.

Boston: Demand and supply steady; $100.

Chicago: Demand and supply fair; trend steady; poultry charcoal, in 100-lb. multiwalls $110.

COCONUT OIL MEAL

Los Angeles: Demand slow; trend firmer; supply adequate; $78@79, bulk.

San Francisco: Demand good; supply tight; solvent $65.

Portland: Demand slow; supply ample; trend unchanged; $68.

Seattle: Demand fair; trend steady; supply ample; $75, via truck (California).

COD LIVER OIL (FORTIFIED)

New York: Demand limited; trend steady; supply fair; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 14½@ 15½¢, 1,500 A 15½@20¢, 2,250 A 18½@ 21¢, 3,000 A 21½@23¢; 600 ICU, 1,600 A 17½@19½¢, 2,250 A 20@22¢, 3,000 A 22@ 23¢; f.o.b. Massachusetts, New York or Pennsylvania.

Boston: Demand fair; supply adequate; 600 D, 2,250 A 19¢ lb.; 300 D, 3,000 A 20½¢; 300 D, 2,250 A 18½¢; 600 D, 1,500 A 18¢; 300 D, 1,500 A 17¢.

CONDENSED FISH SOLUBLES

New York: Demand fair; trend steady; supply tight; 44 lb., f.o.b. eastern shore.

Boston: Demand and supply steady; 5¢ lb.

Los Angeles: Demand fair; trend easier; supply adequate; 4¾¢ lb.

New Orleans: Demand light; supply limited; trend steady; $108@112.

Denver: Demand fair; trend steady; supply ample; dried $132.40.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $44.90, meal $71.90.
Atlanta: Feed $50.98, meal $77.98.
Birmingham: Feed $49.64, meal $76.64.
Boston: Feed $49.84, meal $76.84.
Chicago: Feed $38, meal $65.
Cleveland: Feed $46.14, meal $73.14.
Denver: Feed $48.51, meal $75.51.
Ft. Worth: Feed $46.96, meal $73.96.
Indianapolis: Feed $43.36, meal $70.36.
Kansas City: Feed $38, meal $65.
Louisville: Feed $45.21, meal $72.21.
New Orleans: Feed $48.20, meal $75.20.
New York: Feed $49.43, meal $76.43.
Norfolk: Feed $48.71, meal $75.71.
Philadelphia: Feed $49.02, meal $76.02.
Pittsburgh: Feed $46.96, meal $73.96.
St. Louis: Feed $38, meal $65.

CORN OIL MEAL

Cincinnati: Demand fair; trend lower; supply adequate; $46.50.

Louisville: Demand slow; trend steady; supply normal; $56.45.

COTTONSEED OIL MEAL

Kansas City: Demand very light; trend steady; supply limited and dwindling but enough for demand; old process meal $62, Memphis; solvent $61@62.

Ft. Worth: Demand very poor; supply sufficient; 41% old process $68; solvent 1% fat added $63; pellets $2 additional; cottonseed hulls $16@18.

Philadelphia: Demand slow; supply fair; $80.

Los Angeles: Demand fair; trend unchanged; supply limited; $71@72, bulk.

Portland: Demand slow; trend weak; supply ample; $79.

San Francisco: Demand good; supply tight; 41% $75; 44% solvent $78.

Boston: Demand poor; supply ample; $78.

Wichita: Demand fair; supply sufficient; 41% old process $72.

Ogden: Supply normal; 41% $77@82.

Omaha: Demand slow; trend easy; supply ample; 41% solvent $65.10, bulk.

New Orleans: Demand slow; supply limited; trend steady; $73.50@74.

Cincinnati: Demand poor; trend steady; supply adequate; $70.

Chicago: Demand and supply fair; trend steady; hydraulic $62, carlots; solvent $62 carlots; both Memphis basis.

Louisville: Demand slow; trend easy; supply normal; crushers about through until new crop in fall; old process $68.50, new process $66.50.

Buffalo: Demand poor; trend steady; supply adequate; $80.50, Boston.

Denver: Demand fair; trend steady; supply ample; $70.60.

Seattle: Demand fair; trend steady; supply ample; 41% expeller process $85, truck lots.

Atlanta: Demand fair; trend steady; supply limited; 41% $66, f.o.b. Georgia producing mills.

Memphis: Demand poor; trend steady to easy; supply limited; prime 41% protein, old process $61.50; new process, 41% solvent $62.

CURACAO PHOSPHATE

New York: Trend steady; ground Curacao phosphate in 100-lb. bags $48, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED ANIMAL STEROL (POWDERED)

New York: Demand and supply good; trend steady; price per lb. in 50- and 100-lb. bags, or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

Cincinnati: Demand and trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 18¢ lb., warehouse.

Kansas City: Demand fair; trend steady; supply adequate; 1,500 ICU 9¾@10¢ lb.; 3,000 ICU 11½@12¢ lb., in ton lots.

D ACTIVATED PLANT STEROL (POWDERED)

Chicago: Demand good; supply fair; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots, less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 28¢ lb., ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $48 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum calcium 36%, maximum fluorine .18% $69.12 net ton, f.o.b. Wales in 100-lb. multiwall bags, $3 less in bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .19% $71.50, net ton, f.o.b. Houston, 100-lb. multiwall paper bags; $68.50 in bulk.

Cincinnati: 18% phosphorus $81, sacked; 13% phosphorus $64.98, sacked.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; carlots $63.50, truck load $64.25, net ton, f.o.b. Coronet in 100-lb. multiwall bags $60.50 and $61.25 in bulk.

DICALCIUM PHOSPHATE

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $83.25 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn.; less than 20,000 lb. $93.25; 21% phosphorus, 20,000 lb. or more $94.50, basis Chicago Heights and Nashville; less than 20,000 lb. $104.50; bulk boxcars or hoppers $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $83.25; freight equalized with closest producing point, carload basis.

Texas City, Texas: 18.5% minimum phosphorus, 21% minimum calcium, 24% maximum, granular $77.70 net ton, f.o.b. Texas City in 100-lb. multiwall bags; bulk, boxcars and hoppers, $3 net ton less than bagged material.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $83.25, f.o.b. Columbia, in 100-lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $94.10, delivered; $3 less in bulk.

Trenton, Mich.: Minimum phosphorus 18½%, maximum fluorine .03% guaranteed $83.25, f.o.b. Trenton in 100-lb. multiwalls; minimum phosphorus 21%, maximum fluorine .03% guaranteed $94.50, f.o.b. Trenton in 100-lb. multiwall bags.

Portland: Demand good; supply ample; trend unchanged; $115.

Cincinnati: 18½% phosphorus $92@93.

Denver: Demand fair; trend steady; supply ample; $93.60.

DISTILLERS DRIED GRAINS

San Francisco: Demand fair; supply ample; solubles $85.

Philadelphia: Demand slow; trend unsettled; supply light; $61.

Boston: Demand slow; supply plentiful; trend easier; light $55, dark $56, both bulk, f.o.b. shipping points.

Cincinnati: Demand poor; trend steady; supply adequate; by truck $52.

Louisville: Demand slow; trend weak; supply good; bourbon grains: light $48@50, dark $52@53, solubles $77.

Buffalo: Demand and supply fair; trend steady; $56, bulk, Boston.

Seattle: Demand good; trend steady; supply limited; $67.50, truck lots.

DRIED BEET PULP

San Francisco: Demand good; supply fair; $52.50.

Los Angeles: Demand steady; trend unchanged; supply light; molasses $47.30, bulk.

Boston: Demand slow; supply plentiful; $59@60.

Ft. Worth: Demand slow; offerings light; carlots, 50-lb. papers $61.

Portland: Demand good; supply limited; trend unchanged; $59.

Ogden: Supply normal; $44@48.

New Orleans: Demand fair; trend steady; supply limited; $61@62.

Buffalo: Demand poor; trend steady; supply adequate; $60, Boston.

Denver: Demand good; trend steady; supply ample; $49.23.

Seattle: Demand good; trend firm; supply limited; $49, carlots.

Atlanta: Demand fair; trend steady; supply limited; $64.50.

Milwaukee: Demand good; supply fair; molasses $53, plain $53.

DRIED BUTTERMILK

San Francisco: Demand fair; supply ample; 11½¢ lb.

New Orleans: Demand fair; trend easy; supply normal; $11.50@12 cwt.

Ogden: Supply normal; $8.50, 100-lb. bag.

Los Angeles: Demand slow; trend unchanged; supply adequate; 11¾¢ lb.

Chicago: Demand inactive; trend steady; supply good; medium acid $10.75@11 cwt., sweet cream $11@11.25 cwt.

Louisville: Demand slow; trend steady; supply normal; 11½@12¢ lb.

Buffalo: Demand good; trend steady; supply limited; $11.85 cwt.

Milwaukee: Demand and supply fair; steady trend; $11 cwt.

DRIED CITRUS PULP

Boston: Demand very slow; supply ample; $35, f.o.b. Florida.

San Francisco: Demand and supply fair; meal $54.

Los Angeles: Demand steady; trend unchanged; supply light; orange pulp $43, bulk; lemon pulp $42, bulk.

New Orleans: Demand fair; trend strong; supply good; $35@40, f.o.b. Florida points.

Buffalo: Demand poor; trend steady; supply fair; $37, f.o.b. Florida points.

Atlanta: Demand fair; trend steady; supply limited; $35@40, f.o.b. Florida producing mills; meal $30@35.

DRIED SKIM MILK

Cincinnati: Demand fair; trend steady; supply adequate; 10¾¢ lb.

San Francisco: Demand and supply fair; 13½¢ lb.

Portland: Demand good; supply ample; trend unchanged; 13¢ lb.

Boston: Demand fair; supply good; 12¢ lb.

Philadelphia: Demand slow; supply light; $12.50 cwt.

Ogden: Supply normal; $15.15, 100-lb. drum.

Los Angeles: Demand slow; trend unchanged; supply adequate; 14¢ lb. in less than ton lots; 13¾¢ lb. in ton lots.

New Orleans: Demand fair; trend unchanged; supply ample; $11.50@12 cwt.

Chicago: Demand quiet; trend steady; supply adequate; $10.75 cwt., carlots.

Minneapolis: Supplies still tight, but a little more easy to obtain; market continues firm at $11@11.25 cwt.

Buffalo: Demand just fair; trend steady; supply ample; $10.65 cwt.

Louisville: Demand slow; trend steady; supply normal; 11½@12¢ lb.

Milwaukee: Demand and supply fair; $11 cwt.

DRIED WHEY

Philadelphia: Demand slow; supply light; $6.50 cwt.

Ogden: Supply average; $6.90, 100-lb. bag.

Boston: Demand steady; supply adequate; 5½¢ lb.

San Francisco: Demand steady; supply good; $5.75 cwt.

Los Angeles: Demand slow; trend unchanged; supply ample; $6.10 cwt. in carloads; $6.35 cwt. in l.c.l.

Ft. Worth: Demand fair; supply adequate; carlots, standard $6; $6.25 ton lots, f.o.b. warehouse Ft. Worth.

Cincinnati: Demand fair; trend steady; supply adequate; $6.15 cwt.

New Orleans: Demand good; supply ample; trend steady; $6@6.25 cwt.

Portland: Demand good; supply ample; trend unchanged; $6.40 cwt.

Chicago: Demand slow; trend steady; supply ample; $5.50 cwt., f.o.b. plant.

Louisville: Demand slow; trend steady; supply normal; 6@6½¢ lb.

Denver: Demand fair; trend steady; supply ample; $6.50 cwt.

Kansas City: Demand good; trend steady; supply light; $5.50 cwt., producers' plants for both regular and partially delactosed.

Minneapolis: Demand fair; steady trend; good supply; $5.50 cwt., producers' points.

Seattle: Demand and trend steady; supply good; $6.40 cwt., ex-warehouse, l.c.l.

FEATHER MEAL (HYDROLYZED)

Ft. Worth: Demand fair; supply moderate; 85% to 87% protein $100, f.o.b. trucks, north Texas plants.

Boston: Demand light; supply short; $85, f.o.b. shipping points.

Los Angeles: Demand light; trend unchanged; supply adequate; $1.25 a unit of protein.

Atlanta: Demand fair; trend steady; supply ample; $101, f.o.b. Georgia and Alabama producing plants.

Salisbury, Md.: Good demand; supply rather limited; $98, bulk, f.o.b. producers' plants.

FISH MEAL

Boston: Demand cautious; supply ample; $134, f.o.b. East Coast points.

Ogden: Supply normal; $2.20 a unit, f.o.b. Coast; 65% $172@174.

Ft. Worth: Demand fair; limited offerings for immediate account poor fishing weather; 60% menhaden scrap $128, menhaden meal $134@135, f.o.b. Gulf ports; menhaden meal $133, f.o.b. Mississippi.

Los Angeles: Demand slow; trend easier; supply ample; local production, 60% protein $2.30@2.35 a unit.

San Francisco: Demand good; supply tight; $2.10 a unit of protein.

Portland: Demand slow; supply ample; trend unchanged; $2.30 a unit.

Cincinnati: Demand fair; trend steady; supply adequate; $160.

New Orleans: Demand fair; trend steady; supply light; menhaden, 60% $134@138; scrap $129@134, f.o.b. Gulf.

Chicago: Demand quiet; trend steady; supply adequate; menhaden — Gulf, meal $129@130 and scrap $125@126; eastern menhaden—meal $133 and scrap $129; little or no offerings of herring-salmon blends or eastern white fish.

Atlanta: Demand fair; trend steady; supply ample; 60% $125 for bulk scrap; $130 for sacked meal, both f.o.b. Gulf producing mills.

Seattle: Demand fair; trend firm; supply good; $2.43 a unit protein, truck lots (Canadian production).

Louisville: Demand dull; trend steady; supply light; $160, nominal.

Denver: Demand good; trend steady; supply very tight; $2.45 a unit of protein, f.o.b. West Coast.

Milwaukee: Demand and supply fair; 60% $159.50.

HAY

Wichita: Demand poor; supply ample; prairie $15; alfalfa $15@18.

Ogden: Supply normal; $1@1.25 bale; $20 ton in the barn.

Boston: Demand and supply seasonally steady; No. 2 timothy $40@42.

Philadelphia: Demand slow; supply light; $26@26.

Ft. Worth: Demand fair for alfalfa, practically nil for prairie and Johnson grass; supply sufficient; carlots, baled, No. 1 alfalfa $36@38, No. 2 $34@36; No. 2 prairie $26@28; No. 2 Johnson grass $24@26, delivered Texas common points.

Los Angeles: Demand slow; supplies more than ample; U.S. No. 1 $34@36; U.S. No. 2 leafy $32@33; U.S. No. 2 green $30@32; U.S. No. 2 $26@28.

Portland: Demand good; trend lower; supply ample; new crop $32.

Cincinnati: Demand fair; trend steady; supply adequate; by truck—No. 1 timothy $24; No. 1 second cutting green alfalfa $31; mixed $27; wheat or oat straw $19.

Louisville: Demand very dull; trend weak; supply good; No. 1 local hay, any variety $23@24, No. 2 about $2@3 less; straw $18@19.

Denver: Demand fair; trend average; supply short; alfalfa, baled $25@27 on old hay.

Seattle: Demand fair; trend steady; supply good; alfalfa, U.S. No. 2 green (new crop) $30, truck lots.

HOMINY FEED

Cincinnati: Demand poor; trend steady; supply adequate; $48.

Boston: Demand fair; supply ample; in bulk $50.50.

Kansas City: Demand fair; trend steady; supply adequate; yellow $41, bulk, $3.50 more for sacks.

New Orleans: Demand fair; trend steady; supply adequate; $52@53.

Chicago: Demand and supply fair; trend higher; $45@45.50, carlots.

Buffalo: Demand fair; trend steady to lower; supply good; $50.50, bulk, Boston.

Louisville: Demand slow; trend weak; supply normal; $48@50.

Seattle: Demand fair; trend firm; supply good; $58, carlots.

Milwaukee: Demand good; supply fair; $47.50.

Memphis: Demand poor; trend steady; supply light; white $48, yellow $49.

LINSEED OIL MEAL

Ft. Worth: Demand fair; supply limited; Texas production 34% $85, prompt, truck.

Wichita: Demand good; supply insufficient; 34% $83.50.

Los Angeles: Local production, 29% protein, nothing available.

San Francisco: Demand fair; supply ample; $83.

Portland: Demand slow; supply ample; trend unchanged; $87.

Philadelphia: Demand fair; trend unsettled; supply nil; 34%, no quotations.

Cincinnati: Demand poor; trend lower; supply adequate; new process $78; old process $84.

Boston: Demand slow; supply adequate; 34% $62, bulk, Minneapolis.

Omaha: Demand fair; trend steady; supply tight; 34% solvent $67.80, bulk; 32% old process $71.30, Omaha basis.

Kansas City: Demand slow; trend steady; supply adequate on solvent but no old process meal available; solvent $62@62.50, bulk, Minneapolis.

New Orleans: Demand slow; supply ample; trend steady; $84@85.50.

Chicago: Demand and supply fair; trend easier; solvent $61.50, carlots.

Louisville: Demand dull; trend easy; supply light; old process $83.50, new process $79.50.

Minneapolis: Demand fair at best; production still rather slow but lack of demand holds price at $61.50@62.50, bulk, Minneapolis, for solvent linseed oil meal.

Seattle: Demand fair; trend firm; supply limited; $90, carloads, 34% protein (Montana).

Milwaukee: Demand good; supply fair; old process $78.50@82, nominal; new process: June $72.50, July $71.50.

MALT SPROUTS

Boston: Demand and supply limited; $42.50, nominal.

Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $40@41.

New Orleans: Demand fair; trend steady; supply adequate; $42@44.

Chicago: Demand and supply fair; trend steady; No. 1, even weights, bulk $30.

Milwaukee: Demand good; supply fair; odd weights $35; even weights $37.50.

MEAT AND BONE MEAL

Los Angeles: Demand slow; trend easier; supply ample; 50% protein $2@2.05 a unit, bulk.

San Francisco: Demand good; supply ample; $1.90 a unit of protein, bulk.

Portland: Demand slow; trend lower; supply ample; $2 a unit.

Denver: Demand and trend steady; supply ample; $88 bagged, truck lots; $85, bulk.

Louisville: Demand dull; trend weak; supply good; $72.50@80.

Cincinnati: Demand better; trend steady; supply fair; 50% meat and bone scraps $85, Cincinnati.

Boston: Demand slow; supply plentiful; $1.30 a protein unit; converted 50% $77.50.

Wichita: Demand moderate; supply sufficient; 50% $90, f.o.b. plant; 55%, no quotations, no offerings.

Ft. Worth: Demand fair; supply sufficient; meat and bone, 50% $85, f.o.b. or delivered Ft. Worth.

New York: Demand fair; trend steady; supply good; 50% $75, 55% $82.50, bulk; 50% $78, 55% $85.50, sacked.

Kansas City: Demand mediocre; trend steady; supply ample; 50% meat and bone scraps $87.50.

Omaha: Demand slow; trend steady; supply ample; $85.

Ogden: Supply average; $110 in 100-lb. bags.

New Orleans: Demand good; supply ample; trend steady; $90@93.

Chicago: Demand fair; trend easier; supply adequate; 50% protein, 100-lb. bags $95.

St. Paul: Fair demand; ample supply; sideways trend; 50% meat and bone meal $88@93.

Seattle: Demand good; trend easy; supply ample; $105, ex-warehouse, 50% protein.

MILLFEED

Minneapolis: Demand fair at best; lack of buying is holding prices at depressed levels of the past couple of weeks. Sellers report buyers on hand-to-mouth basis, buying for immediate needs only. Prices a little better than a week ago. Quotations June 4: sacked bran $32, sacked middlings

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$32.50, red dog $36; bulk bran $27, bulk middlings $27.50@28.

Kansas City: Demand fairly good on sacked shorts and bulk bran, slow on others; trend steady; supply mostly adequate with sacked shorts a little tight; bran $29.50@30.25, shorts $37@37.75, sacked; bran $25@26.75, shorts $33.50@34.25, middlings $26.25@27, bulk.

Wichita: Demand fair; supply sufficient; basis Kansas City: bran $29.75@30.25, shorts $36.25@36.75; bran advanced $1.50, while shorts declined 25¢, compared with the preceding week.

Ft. Worth: Demand fair, light offerings of immediate bran; supply sufficient on shorts and middlings; carlots, burlaps, bran $39.50, gray shorts $45.50@46, bulk middlings $37, delivered Texas common points; 50¢ higher on bran and shorts, and $1 higher on middlings compared with previous week.

Chicago: After several weeks of persistently lower markets, millfeeds reversed their trend during the past seven days. Recoveries, however, were nowhere nearly broad enough to wipe out the losses that were marked up during May. Best prices were made the first day or two of the current calendar week but there has been a moderate softening tendency noted. It is not sufficient to erase the full extent of the price turn-about. For the week ending June 3 standard bran and standard midds. were both up about $1.50@2 and red dog from 50¢@$1. While trade is still anything but broad, it has been undeniably more active than during the past several weeks when prices were on the toboggan. Offerings have not been pressing. Quotations, carlots: standard bran, sacked $36.50@37 and bulk $31.50; standard midds., sacked $37.50@38 and bulk $32@32.50; red dog, sacked $42.50 and bulk $39.

Los Angeles: Demand better; trend firmer; supply lighter; standard mill run $43.50@44.50, bulk; red bran $43.50@44.50, bulk.

Cincinnati: Demand poor; trend lower; supply adequate; bran $41, middlings $44.

Louisville: Demand fair; trend stronger; supply good; bran $41.10, mixed feed $44.60, shorts $49.10, middlings $44.80.

Buffalo: Supplies exceeded demand and millfeeds moved lower again last week but there was no aggressiveness on the decline. Trading was quiet and on a hit and miss basis. Prices were $1.50 below the West but there wasn't enough eastern demand to bring levels here up to the rail differential. The sacked differential widened out again to $7.50 from $7. Bulk bran ended $2 lower, sacked was off $1.50. Bulk middlings and red dog declined $1, sacked middlings and red dog were down 50¢. Quotations June 3: bulk bran $29@30.50, sacked $37@37.50; bulk middlings $32.50@33.50, sacked $40@40.50; bulk red dog $34@36, sacked $41.50@43.

Denver: Demand good; trend steady to firm; supply ample; shorts $40.25, bran $33.25, mill run $36.75.

Omaha: Demand fair; trend steady; supply ample; bran $30, gray shorts $37, bulk standard midds. $28, all Omaha basis.

Boston: Demand slow; supply plentiful; bran $46.50, middlings $48.50.

New York: Demand poor; trend lower; supply good; bran $42.50@43.50; standard midds. $45.50@46.50.

Philadelphia: Demand spotty; trend unsettled; supply ample; bran $47, standard midds. $49, red dog $51.

New Orleans: Demand fair; trend steady; supply ample; bran $41.50@42.25, shorts $48@48.75, sacked; bran $37.50@38.25, shorts $45@45.75, bulk.

Memphis: Demand fair; trend steady to higher; supply ample to plentiful; wheat bran $37.50, sacked; gray shorts $44.30, sacked; standard midds. $36.70, bulk.

Seattle: Demand fair; trend easy; supply ample; $44, common transit points, carlots.

Portland: Demand slow; trend lower; supply ample; $41.

Ogden: Supply average; to Utah and Idaho: red bran and mill run $42, middlings $47; to Denver: red bran and mill run $49, middlings $54; to California: red bran and mill run $49.50, middlings $54.50, f.o.b. San Francisco and Los Angeles.

San Francisco: Demand good; supply tight; millfeed $46; red bran $47.50.

MINERAL FEED

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Ft. Worth: Demand fair; supply sufficient; all-purpose granules $87, block $94; mineral phosphorus 6% granules $106, block $110; cattle-sheep mineral 7% phosphorus granules $100, block $107; hog mineral phosphorus 3½% granules $87, phosphorus 2% $77 (all in 50-lb. paper bags).

Denver: Demand fair; trend steady; supply ample; $155.

Wichita: Demand fair; supply ample; all-purpose with iodine, 50-lb. blocks $97.50, 100-lb. bags $92.50, f.o.b. plant.

Ogden: Supply average; $113 in 50-lb. blocks; $103, granular, 50-lb. bags.

Portland: Demand slow; supply ample; trend unchanged; $45.

Seattle: Demand fair; trend steady; supply good; mixer mineral $48, ex-warehouse; all-purpose mineral $35, ex-warehouse.

Sioux City: 50-lb. mineral blocks 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

MOLASSES

Cincinnati: Demand fair; trend steady; supply adequate; 12¢ gal., New Orleans.

New York: Demand fair; trend steady; supply good; blackstrap 16¢ gal., tank cars, tank wagons, f.o.b. New York.

Kansas City: Demand slow; trend stronger; supply adequate; 12¢ gal., tank car, New Orleans, although some companies have raised their asking price to 13½¢.

Boston: Demand steady; supply plentiful; 16½¢ gal. in tank cars.

San Francisco: Demand and supply good; $21.50, f.o.b. cars, Richmond, Cal.

Ft. Worth: Demand fair; supply sufficient; blackstrap 12½¢ gal., f.o.b. Houston; delivered Ft. Worth truck $28.07 ton, seller's market price on date of shipment.

Louisville: Demand slow; trend steady; supply ample; 12¢ gal., tank car lots, f.o.b. Gulf ports.

Buffalo: Demand fair; trend steady; supply good; 16½¢ gal., f.o.b. Albany.

Denver: Demand poor; trend steady; supply ample; 12¢ gal., New Orleans; $20.52 ton, New Orleans; $21.50, f.o.b. West Coast.

New Orleans: Demand good; supply adequate; trend steady; 12¢ gal., tank cars and trucks; 600-lb. customers' drums $8.33.

Los Angeles: Demand good; trend unchanged; supply adequate; $21.50, bulk, f.o.b. tank cars; $21.75, bulk, f.o.b. tank trucks.

Seattle: Demand fair; trend easy; supply good; $21.50, f.o.b. Seattle, tank car lots or truck lots.

Atlanta: Demand fair; trend steady; supply good; citrus $20@22.50, bulk, f.o.b. Florida producing mills.

Milwaukee: Demand fair; supply good; blackstrap 12¢ gal., f.o.b. New Orleans.

Minneapolis: No Gulf price reported; demand is very slow; supplies ample; stronger trend; price delivered Twin Cities $32.50, tank trucks.

Memphis: Demand fair to poor; trend steady; supply adequate; blackstrap 12¢ gal., tank car, f.o.b. New Orleans, and $28.50 ton, delivered Memphis, truck.

NIACIN

New York: Trend steady; $6 kilo, 10-kilo lots; $6.20 kilo, 5- and 2½-kilo lots; $6.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT BY-PRODUCTS

Louisville: Demand dull; trend fairly steady; supply normal; reground $28.30, up $2; rolled oats $82.30, down $2; feeding oatmeal $76.80, down $2.50; pulverized $52.80, off 50¢; crimped $69.30, unchanged.

Ft. Worth: Demand poor; supply sufficient; oat millfeed $46.70; reground $28.20.

Boston: Demand spotty; supply adequate; white pulverized $54.50; reground oat feed $29@30.50.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $50@52; rolled oats $83.

Portland: Demand slow; supply ample; trend unchanged; rolled $66, ground $63, cleaned $65.

Los Angeles: Demand slow; trend unchanged; supply adequate; pulverized oats, local production $62.

Chicago: Demand less aggressive; trend easier; supply fair; reground oat feed $18.50@19, carlots; fine ground feeding oatmeal $68@69, carlots; feeding rolled oats $78@79, carlots.

Seattle: Demand and supply fair; trend firm; $53, bulk, truck lots.

Philadelphia: Demand slow; supply fair; pulverized white $53; Canadian oat feed $29.50, domestic $30.

Minneapolis: Market unchanged to slightly weaker; fair demand; feeding rolled oats $81; feeding oatmeal $70; pulverized $44.50; crimped $59; reground oat feed $16.

Memphis: Demand fair; trend steady; supply light; 3½% protein, reground oat feed $24.75.

OYSTER SHELL

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Louisville: Demand and supply good; trend steady; in 80-lb. paper sacks $23.45; in 50-lb. paper sacks $23.70; in 25-lb. paper sacks $25.45.

Portland: Demand good; supply ample; trend unchanged; western $34, eastern $39, granite grits $28, shell flour $24.

Los Angeles: Demand slow; trend unchanged; supply ample; $14.80.

Boston: Demand and supply steady; in paper $26.02.

New Orleans: Demand and supply good; trend steady; $24@24.50.

Cincinnati: Demand fair; trend steady; supply adequate; $24.45.

Seattle: Demand and trend steady; supply good; eastern $36, carlots.

PEANUT OIL MEAL

Atlanta: Demand fair; trend steady; supply very limited; 45% old process $54, solvent $53, both f.o.b. Georgia and Alabama producing mills.

Milwaukee: Demand and supply fair; 26% $42.

PEAT MOSS

Los Angeles: Demand fair; trend unchanged; supply ample; Canadian, 6.1 cu. ft. bales $3.75.

Portland: Demand good; supply ample; trend unchanged; $1 bale.

Boston: Demand and supply steady; $3.15 bale in carlots.

Philadelphia: Demand good; supply fair; $2.95, f.o.b. pier, nominal.

San Francisco: Demand and supply fair; $3.65 bale.

Chicago: Demand steady; supply ample; trend unchanged; in standard 7⅛ cu. ft. bales $3.85@3.95.

Seattle: Demand and supply good; trend firm; $2.80 bale, truck lots.

POTASSIUM IODIDE, U.S.P.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures: 250-lb. drums $1.35; 200 lb. in 100-lb. drums $1.35; 100-lb. drums $1.38; 25-lb. drums $1.41, f.o.b. Cincinnati.

Chittenango, N.Y.: Demand good; supply adequate; 90% KI stabilized with calcium stearate, 200 lb. in 100-lb. cartons $1.30; 100-lb. cartons $1.32, 25-lb. cartons $1.45; freight paid to destination.

POULTRY BY-PRODUCTS

Ft. Worth: Demand and supply fair; 55% protein $100, f.o.b. north Texas plants.

Boston: Demand good; supply tight; $98, f.o.b. shipping points.

Los Angeles: Demand fair; trend weaker; supply adequate; $1.80 a unit of protein.

Atlanta: Demand fair; trend steady; supply good; $91, f.o.b. Georgia and Alabama producing mills.

Salisbury, Md.: Good demand; limited supply; $98, bulk, f.o.b. producers' plants.

RIBOFLAVIN

New York: Trend steady; feed grade (in feed supplements) 4½¢ gm. in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in less than ton lots, in 3.36 to 16 gm./lb. mixtures; 3¢ in ton lots or more; freight prepaid or paid to destination.

RICE BY-PRODUCTS

San Francisco: Demand good; supply ample; bran $45; polished $49.

Ft. Worth: Demand steady; offerings light; carlots, rice bran $33@34, f.o.b. south Texas rice mills; hulls $6.50, f.o.b. mills.

Los Angeles: Demand slow; trend unchanged; supply adequate; bran, California production, high fat content $51.

Atlanta: Demand fair; trend steady; supply ample; bran $43.

SCREENINGS

Cincinnati: Demand fair; trend lower; supply adequate; ground screenings $39.

Ft. Worth: Demand nil; supply light; ground grain $30@32.

Buffalo: Demand fair; trend lower; supply good; ground, sacked $31, New York, lake and rail; unground, bulk $25.25, New York.

Chicago: Demand quiet; trend easier; supply ample; ground grain screenings $31, Canadian $22.

Minneapolis: Very little domestic screenings; supplies normal on Canadian screenings, but demand is slow; slightly weaker trend; lights $5@15; mediums $16@25; heavies $26@36; Canadian bulk $16; Canadian ground $25; flaxseed screenings $36; oil type flaxseed screenings $45, basis 15%.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.88@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.04.
Philadelphia: $24.32@24.95.
St. Louis: $24.14@24.27.

SORGHUMS

Ft. Worth: Demand fair; limited offerings; carlots, bulk, No. 2 yellow milo $2.57@2.59, delivered Texas common points.

Los Angeles: Demand fair; trend unchanged; supply adequate; milo $2.70 cwt., bulk.

SOYBEAN OIL MEAL

Louisville: Demand slow; trend steady; supply normal; $63.20.

Denver: Demand good; trend steady; supply ample; $68.50.

San Francisco: Demand good; supply ample; $78.40.

Los Angeles: Demand slow; trend firmer; smaller offerings; $75.40, bulk.

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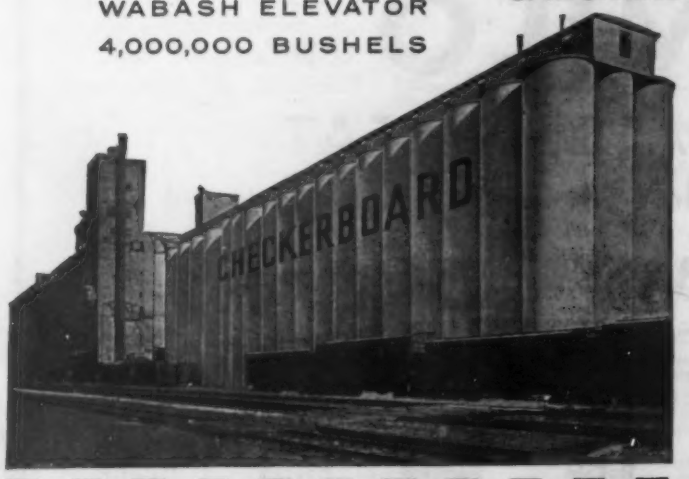

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Philadelphia: Demand and supply fair; trend unsettled; 44% $50.50, bulk, Decatur.

Chicago: Soybean oil meal showed some recuperative action, but recoveries were limited largely to offerings of 44% protein; 50% offerings were still available at the previous week's levels. However, close observers of market action seemed to be of the opinion that they would not be surprised to see some price betterment there too. There were rumblings of possible shutdowns on the part of some of the processing plants but as of mid-week, there were no actual reports of any suspensions of operations. In the Chicago soybean meal futures mart both the July and August deliveries have been bouncing around in a nervous and erratic manner with dips below the $55 level meeting with support and some brisk recoveries while on the other hand, upturns over the $56 mark have met enough opposition to hold them equally well in check. Quotations on cash meal: 44% protein, Decatur basis, unrestricted $53.50@54; eastern restricted $50; 50% protein, unrestricted $58 and eastern restricted $55.50@56.

Omaha: Demand slow; trend easy; supply ample; 44% $56.10, bulk.

Kansas City: Demand slow; trend steady and still confused by new freight rates; supply adequate; 44% meal for Kansas City shipment $51@52, bulk, Decatur; unrestricted $52@54.

Boston: Demand slow; supply ample; 44% $49@49.50; 50% $55@55.50; both bulk f.o.b. Decatur.

Ft. Worth: Demand fair; supply sufficient; carlots, southern origin, 44%: June $67.60, July-September $69.10; 50% protein: June $77.60, July-September $79.10; truck lots: June $68.50@70.50.

Wichita: Demand slow; supply ample; 44% $66, 50% $74, f.o.b. Wichita.

Ogden: Supply normal; $81@86.

Cincinnati: Demand poor; trend steady to higher; supply adequate; $53.50@54, bulk, Decatur.

Portland: Demand slow; trend lower; supply ample; $48, f.o.b. Decatur.

New Orleans: Demand fair; trend steady; supply ample; $62@63.

Seattle: Demand fair; trend easy; supply ample; $80, carlots.

Milwaukee: Demand good; supply fair; $53, bulk, Decatur.

Atlanta: Demand fair; trend steady; supply ample; 44% $67.50.

Minneapolis: Demand termed good, but continued heavy production holds market at $47.50@48, bulk, Decatur for 44% meal; weaker undertone reported; 50% quoted at $54.50, bulk, Decatur.

Memphis: Demand slow; trend steady; supply plentiful; prime 44% solvent $60.50, f.o.b. Memphis.

TANKAGE

New Orleans: Demand slow; supply adequate; trend steady; $94.50@97.

Ft. Worth: Demand slow; supply light; 60% digester $91, Ft. Worth.

Omaha: Demand slow; trend steady; supply ample; $87.50.

Louisville: Demand dull; trend weak; supply good; 60% $73.50@80.

Cincinnati: Demand fair; trend steady; supply good; 60% digester $85, Cincinnati.

Wichita: Demand moderate; supply sufficient; 60% $90, f.o.b. plant.

Kansas City: Demand mediocre; trend steady; supply ample; 60% digester $85.

Chicago: Demand fair; trend easier; supply ample; 60% protein in 100-lb. bags $95.

St. Paul: Fair demand; ample supply; steady trend; 60% digester $88@91.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; limited offerings; 6½¢ lb., f.o.b. north Texas area.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; any quantity in 100-lb. drums $1.50; in 25-lb. drums $1.55; freight allowed to destination.

Rochester, N.Y.: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

New York: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

WHEAT GERM MEAL

New Orleans: Demand fair; trend steady; supply fair; $67@69.

Buffalo: Demand poor; trend steady; supply fair to poor; commercial grade $65.

R. I. Ammon Resigns; To Join NEPPCO

EPHRATA, PA.—Richard I. Ammon, executive secretary of the Pennsylvania Millers & Feed Dealers Assn. for the past eight years, has resigned to accept a similar position with the Northeastern Poultry Producers Council (NEPPCO). His resignation is effective July 1.

Mr. Ammon has been secretary of the association since November, 1950. During his tenure, the membership of the association has more than doubled. A credit bureau, group insurance program, regional meetings and an annual directory were added to the list of association services.

In 1957, Mr. Ammon was elected president of the Secretaries Circle of the Grain & Feed Dealers National Assn. He was one of those responsible for organizing the first Washington Workshop which has since become an annual event in the grain and feed trade.

Mr. Ammon's successor has not yet been announced.

DELMARVA

(Continued from page 6)

Nock and Chuck Fulton; Murray's Feed Service, Inc., William Murray and Melvin Fell; Cohn & Block Co., Robert Street and Stanley Street; St. Michaels Milling Co., Jennings Quillen; Whittington Feed Co., Thomas Whittington; Mardel Products Corp., Ed Mayer, Gene Bounds and R. Holland; A. W. Perdue & Son, Frank Perdue and Harold Sharpe; O. A. Newton & Son Co., Dr. John Hammond; Caper Acres, George Wolfe; Elwood Workman & Son, Preston Workman; Salisbury Milling Co., Benjamin Quillen and Sam Quillen; Peninsula Milling Co., Bill James; and H. E. Williams & Co., George Outten. Delmar Feed Mills was not represented at the meeting, but has subscribed to stock.

To Select Site

A committee to select the site of the plant and storage facilities is composed of Frank Perdue of A. W. Perdue & Son, Inc.; Ed Mayer of Mardel Byproducts; Melvin Fell of Murray's Feed Service; Sheldon Chandler of Berlin Milling Co.; Bill James of Peninsula Milling; Dr. John Hammond of O. A. Newton; George Wolfe of Caper Acres, and Otis Esham of Otis Feed Co.

The solvent extraction soybean processing plant will cost approximately $700,000 and the storage facilities $1,300,000.

The storage and receiving facilities will handle and store 3 million bushels of soybeans a year. All the soybean meal will be used locally by the feed manufacturers organizing Delmarva Soya Processors. They represent approximately 60% of the growers.

An attempt is being made to complete final details so that some of the 1959 crop can be stored.

Location of the plant on the Delmarva Peninsula is designed to overcome the 1 to 2¢ a pound advantage other poultry producing areas have over Delmarva because of their freight advantages in handling feed, officials said.

C. C. Hammer Named Bemis Treasurer

ST. LOUIS—C. C. Hammer has been named treasurer of Bemis Bro. Bag Co., St. Louis, to succeed T. W. Little, who retired recently. Mr. Hammer joined Bemis Dec. 1, 1958, and was elected assistant treasurer shortly thereafter. Previously he had been asociated with Textron, Inc., as comptroller, and with Standard Products Co. as treasurer.

Mr. Little had been with Bemis more than 40 years, having started in 1916 as a clerk in the Boston office. He was elected assistant treasurer in 1941 and treasurer in 1946. In 1953 he was elected a director of the firm.

In addition to his duties as treasurer, Mr. Little served as director of the burlap department. He will be succeeded in this position by W. D. McLean. Mr. Little will continue as a director of the company.

N. D. Hogg Opens Office in Alberta

TORONTO, CANADA—N. D. Hogg, Ltd., Toronto, will open a western Canada office at Calgary, Alberta, announced Norman Hogg.

In addition to maintaining stocks of feed chemicals, there will be available pre-mix facilities similar to the Toronto operation. Stocks will continue to be maintained in western Canada at Vancouver, Saskatoon and Winnipeg.

W. A. (Bill) Johnson, who has been with the firm for nearly two years in Toronto, will be manager of the new branch. Harold Killins will continue to be sales manager for the western provinces.

Grant Issued for Poultry Research

DURHAM, N.H.—A $3,900 grant to support the poultry pathology research program of the University of New Hampshire has been made by Ultra-Life Laboratories, East St. Louis, Ill.

Research carried on under the grant will be under the direction of Dr. W. R. Dunlop, research pathologist, assisted by Alphonse Langlois, research technician, according to Dr. W. C. Skoglund, chairman of the department of poultry science.

The scientists will study application of nutrients, medicinals and biologicals to young birds. Dr. Skoglund said the grant will enable the university to investigate thoroughly a very important poultry industry problem.

ABBOTT

(Continued from page 1)

policy issued by the Food and Drug Administration on May 29, 1959. This statement appears to be a general interpretation by the Food and Drug Administration of the impact of the Delaney clause on the Food Additive amendment of 1958 on veterinary drugs as ingredients of animal feeds. In some respects this interpretation is considered by many to be unwarranted under the act.

"Moreover, the informal remarks supplementing this statement which were attributed by a segment of the trade press to an FDA spokesman suggest that no additional approvals will be granted to animal feed preparations containing arsenicals. These remarks are astonishing because on the established data they are not warranted by the Delaney clause and are not implicit in the FDA policy statement.

"The Delaney clause is concerned only with a substance which 'is found to induce cancer when ingested by man or animal.' There is no evidence whatsoever that arsanilic acid, used in millions of tons of animal feeds during the last eight years, has caused cancer in man or animal; and, of course, arsanilic acid has previously been formally approved and sanctioned by the FDA itself as a safe ingredient in animal feeds. In the absence of adverse evidence, the Delaney clause is entirely inapplicable to arsanilic acid.

"If the informal remarks attributed to the FDA spokesman are correct, it sets a precedent whereby an entire class of chemical products, known and unknown, is prejudged and condemned. Yet a straightforward reading of the law would indicate that a food additive is to be considered as an individual substance and that its safety is to be judged accordingly.

"Abbott Laboratories has always had the deepest concern for the public health. If Abbott had evidence that arsanilic acid is carcinogenic, the product would not be marketed. We know of no such evidence either from our own research or from the world's scientific literature. Therefore we are continuing to market arsanilic acid."

(EDITOR'S NOTE: The above statement refers in part to a May 30 Feedstuffs story which included a report that no new estrogen or arsenical products will be cleared by FDA. It has been reported that this generally is the case. However, an FDA official has explained, if any product were shown specifically to be noncarcinogenic, its use could be cleared.)

CENTRAL

(Continued from page 1)

The convention was held June 1-2 at the Schroeder Hotel.

Dr. Conrad A. Elvehjem, the University of Wisconsin's new president, addressed the convention on how the feed industry and agricultural institutions such as the one he heads have worked together toward agricultural progress.

Other speakers were: William T. Diamond, secretary-treasurer, American Feed Manufacturers Assn., who discussed some of the changes which have come about in the feed industry and how feed men can adjust to them; Prof. Fred Giesler, meats department, University of Wisconsin, who described Wisconsin's new Pacemaker program for hogs, and Duane F. McKenzie, who reported on a survey which indicated where and how new feed mill equipment starts to pay dividends.

President Reelected

E. H. Sather, Blue Ribbon Feed Co., New Richmond, was reelected president of the Central Retail Feed Assn. New vice president succeeding Ray F. Andersen, Galesville, is Hiram Hegge, Whitehall. Other officers reelected are Harvey Thoma, Sugar Bush (Wis.) Milling Co., secretary-treasurer, and Eldon H. Roesler, Milwaukee, executive secretary.

A new director is Vince Miller, Cadott, succeeding Douglas J. Mangan, also of Cadott. Edwin Bakke, Shawano, was reelected a director. Holdover directors are: Obert T. Asleson, Stoughton; L. A. Lauer, Hartford; Myron Steffen, Dale, and Erwin Seno, Slades Corners.

Among resolutions adopted by the association is one favoring the use of weight as a measurement in grain trading.

Mr. Sather reported that "despite the fact that many feed firms have disappeared during the past 12 months either by going out of business, merger or sale, the association has shown a net gain in members for the year."

At the request of Mr. Sather, the convention group stood for a moment of silent tribute to the late David K. Steenbergh, honorary chairman of the board, who died last January.

Mr. Sather reviewed the association's accomplishments during the past year, and in his list was the veterinarian-feed man cooperation project. He said the association had been approached by the veterinary profession to help work out a program directed toward improving relationships between the two groups.

This request, he said, resulted in the appointment of two standing committees—one of veterinarians and one of feed men to work together in the future.

Ray F. Andersen, Galesville, former association vice president, is chairman of the committee representing the association. Serving with him are: Don Guptill, Producers and Consumers Co., Genoa City; Gene Spitzer, Murphy Products Co., Burlington; R. C. Tesch, Knauf & Tesch Co., Chilton, and Richard Carstens, Henry Carstens & Sons, Kaukauna. Mr. Sather and Mr. Roesler also will work with this committee.

Association members were urged to attend the annual Nutrition School for Feed Men at the University of Wisconsin, Madison, Aug. 11-12, during which more will be said about cooperation between feed men and veterinarians.

Help from Veterinarians

Dr. Erdheim, speaking primarily as a representative of the feed industry, said there are two areas in which a veterinarian can help feed dealers: "He can actually help you sell your feed on an ethical basis" and he can help the feed dealer with field problems.

Dr. Erdheim noted that the veterinarian can, does and will prescribe the dealer's feed formulation just as he would a medicament to solve an animal health problem. "He will prescribe or recommend the feed according to what it can do," Dr. Erdheim said.

In his discussion of how the veterinarian can help the feed dealer with field problems, Dr. Erdheim commented, "Almost never does the

CENTRAL RETAIL FEED OFFICERS—E. H. Sather (right), Blue Ribbon Feed Co., New Richmond, Wis., was reelected president of the Central Retail Feed Assn. at its 34th annual convention held in Milwaukee. H. P. Hegge (second from right), Whitehall, succeeds Ray F. Andersen, Galesville, as vice president. Harvey Thoma (second from left), Sugar Bush, was reelected secretary-treasurer and Eldon H. Roesler (left), Milwaukee, was renamed executive secretary.

feed cause the problem. Usually the problem is poor management, disease or some other cause." The veterinarian, he said, "can dig out the real problems and absolve your feed of responsibility."

Dr. Erdheim advised feed dealers against competing with veterinarians in diagnosing and treating animal disease and suggested that they not "assume responsibility for feeds that isn't built into them."

Trend Toward Specialization

Dr. Anderson noted that there is a trend among veterinarians toward greater specialization in one or more branches of animal health.

He recommended that feed men "call in the local veterinarian of the farmer's choice" when in doubt about a nutrition or disease problem, and said the veterinarian should ask a veterinary specialist for help if he doesn't know the answer. "Here is where we need more trained veterinary nutrition specialists."

Dr. Anderson remarked, "I would like to see more of the big feed companies hire veterinary nutrition specialists that the local veterinarian could call in when in doubt. This worked very well for the big serum and vaccine companies in the days of the hog cholera problems.

"Some feed dealers are hiring veterinarians for a local area. I think they mean well, but I doubt if this is a good idea for the livestock industry or for general public relations."

Dr. Anderson listed some of the reasons why a "veterinarian doesn't always make the first advances to help a new man in another field:

"A veterinarian in the field of general practice is a rugged individualist who has spent much time and money on his education. He is his own boss. He cannot advertise or solicit business because of a strict code of ethics."

Dr. Anderson remarked that the veterinarian "is not such a tough guy once you get to know him. Thanks to our colleges, our younger men are better diplomats than graduates of a few years ago."

Feed Men Criticized

He said he was "calling a spade a spade" when he pointed out several things which he believes have caused friction between veterinarians and feed men. Dr. Anderson said he has heard veterinarians criticize feed men for: Posting pigs and chickens, diagnosing disease, displaying cards showing how to use a syringe, giving baby pigs iron injections and selling drugs and veterinary supplies like a drug store.

"I won't argue whether these points are just or fair, but I believe they have caused friction," Dr. Anderson declared. "The answer is, do these things protect the livestock industry? Are their profits worth the public relations cost? Haven't the high power drugs salesmen over-sold us all."

"A farmer with a sick animal is quite likely to blame an outsider rather than himself for his troubles, and feed is frequently the scapegoat," Dr. Anderson said. "Many of our troubles start because the farmer misquotes either the feed man or the veterinarian when talking over his problem." He suggested that when feed is blamed the veterinarian and the feed man should be at the farm together so that no one can be misunderstood.

Questions and Answers

A short session of questions and answers was conducted following each of the talks by Dr. Erdheim and Dr. Anderson.

Both veterinarians were asked if a practicing veterinarian should engage in the feed business, and both agreed that he should not be a feed dealer.

Dr. Erdheim said he believed it was proper for a veterinarian to dispense special mixtures to treat a specific disease problem and he could see no reason why the veterinarian should not be allowed to invest in a feed dealership. But he said "no" to an "out-and-out feed dealership."

Dr. Anderson referred to some of the comments he made previously in his talk when asked if a veterinarian should work on a retainer fee with a feed company. He repeated that he would rather see feed companies hire nutrition specialists to help local veterinarians in solving tough nutrition and disease problems.

Asked of Dr. Erdheim was a question involving the veterinarian's apparent lack of interest in poultry diseases, and it was admitted that criticism was warranted in this area but steps are being taken to improve the situation. The trend toward specialization by veterinarians was cited as a possible answer to this problem.

Other Talks Summarized

Summaries of other convention talks follow:

WORKING TOGETHER — After citing several examples of how contributions had been made to the feed and livestock industries through experimental work at the University of Wisconsin, Dr. Elvehjem remarked, "But what good would these findings be if the industry and livestock farmers had not accepted them, promoted them and actually used them? The full value of research comes when it is put to use."

Dr. Elvehjem said the feed industry serves "a vital role in the very important transfer of knowledge from the laboratory to the farm."

"Another place where the feed industry and university can work together profitably is in careful evaluation of proposed changes or new developments in feeds," Dr. Elvehjem said. He said the university will continue to welcome the opportunity to work with industry in appraising new ingredients.

He recommended that feed dealers, in their contacts with farm youth and parents "tell about the satisfactions and opportunities in agricultural industry work."

THE PAYOFF POINT IN EQUIPMENT—Duane F. McKenzie, market research consultant, Minneapolis, discussed the findings of a research project undertaken to determine whether a firm consisting of electronic engineers, digital computer analysts and systems personnel should get into the business of converting feed mills to automation. He used this example of research to help feed mill operators answer their questions regarding the value of expansion with labor-saving machinery.

Mr. McKenzie said 30 mill owners were interviewed to find out at what point of production the installation of a central control system would be practical and profitable.

It was found from the records of the 30 mills that "a good median mill" produced about 80 tons of feed per day. This capacity was used in determining the cost of producing a ton of "mythical average feed."

Drawing on its experiences with automating concrete premix plants, the investigating firm assumed that it could reduce the number of men necessary to operate a feed mill with a capacity of 80 tons a day from 16 to 6, but realized that some of those six men would have to go to school and learn how to operate electronic controls and would have to be paid more. It was assumed that $20 a day per man would be enough to compensate for the higher training required by automation.

Mr. McKenzie said that the group making the study knew that loading time could be cut by increasing the number of loads per hour with the same machinery to 6 or 6½, and with full automation to 9 loads an hour.

But this speed-up presented a problem: Could the mill sell the additional feed? The answer to this question was found to be "yes." It was determined that a 50¢ cut in the mill's retail price for all feeds and faster service would make it possible to sell the additional production with no more selling or administrative costs.

Analysis of data shows that the labor cost of $120 per day with automation and production of approximately 100 tons of feed per day would give a production labor cost of $1.20 per ton—a saving of $1.80. Mr. McKenzie added that selling feed for 50¢ lower than the previously determined price to promote the sale of the extra production would bring the saving down to $1.30 or about $130 a day. "In addition," Mr. McKenzie noted, "20 extra tons could be produced with an added profit of $60 per day."

The per day profit figure of $190 multiplied by 190 days of full production showed a gross of $36,000 for the year. Expenses and taxes reduced this figure to $19,495.

Mr. McKenzie explained that government economists recommend 2½ times annual income can be spent safely for a major capital investment. Therefore, it was determined that a mill of the size considered in the study could spend $45,000 to $48,500 for automation and break even.

He said it was then up to the firm making the analysis to develop an automation plan costing $40,000 or less so that the mill could realize a profit.

PACEMAKER PORK PROGRAM—A new Wisconsin pork production program, said to be developed to complement another record-keeping plan already in operation, was described by Prof. Fred Giesler, meats department, University of Wisconsin, Madison.

The Pacemaker program, he said, has these requirements: (1) Entire herd must be enrolled for at least a three-month period, (2) the sow herd must number at least five during this period, (3) sows must be identified and all farrowing dates recorded, (4) all pigs must be individually ear notched using the Wisconsin system, unless the producer has purebreds, (5) where feeder pigs are sold on a per head basis, they must be weighed at between six and eight weeks of age by the county committee or its representative; where sold on a per head and weight basis, sale weight will be accepted when the buyer signs the sale sheet and (6) all market hogs sold by the producers will be graded by the buyer or county grading committee.

"I believe that we will all agree that hog production is now facing a drastic revolution," Prof. Giesler said.

"A quick look around at what neighboring states are doing indicates that they are not idle but rather moving ahead rapidly in the direction of specialization, and we in Wisconsin will need to move along with them if we are to hold a prominent place in hog production."

Prof. Giesler noted that, according to reports, more than 600,000 Wisconsin feeder pigs are moving annually into other states to be finished for market. "I believe you, as feed men, can help us to keep more of these good hogs in our state to be finished out to market weight," he said.

Referring to a bulletin on the Pacemaker pork program distributed to the convention audience, Prof. Giesler said the hog producer "will find that we recommend rations, particularly starter rations, that are well fortified feeds and generally not suited to home mixing.

"Here is an opportunity for you as a feed group," he said, "to assist producers in getting their young pigs off to a good start."

YOUR PLACE IN THE PATTERN—"If there ever was an opportunity for feed men—today is that time," commented William T. Diamond, secretary-treasurer, American Feed Manufacturers Assn., Chicago.

"The feed industry is made to order for the optimist," he said. "Unlike industries which are in the 'hard goods' line where products can be made to do another year, the feed man has a steady replacement market, since his product is purchased to be fed to produce more income for the farmer. It is an enviable position, unique in American industry."

"How are you going to find your place in the changing patterns of American agriculture?" he asked. "More farmers look to the local feed man for advice than to any other single person," he said. "The farmer depends on you to give him the advice which can help him make more money."

The feed man of today must be more aggressive, Mr. Diamond remarked.

The successful feed man, he said, "will work hard at building good will and confidence among his customers. To this kind of feed man the problems of integration hold no terror. He is in business to stay and his greatest worry will be to find a son or deserving younger man who can carry on after he reaches retirement age with a profitable business at hand."

Mr. Diamond mentioned the Food & Drug Administration's recent statements regarding the current status of estrogens and arsenicals in feeds under the Delaney amendment to the new feed additives law. "You may think that FDA is moving into our business," he said, "but really we are moving into FDA's bailiwick."

Mr. Diamond made some specific observations concerning the egg, pork and broiler industries.

"Egg authorities expect production centers to move closer to market," he said. "The current price picture is expected to improve shortly."

"The swine industry must produce a better type of hog" to meet the demands of the consumer, he said. Mr. Diamond believes the Corn Belt will continue to raise about the same percentage of total hog production in the future as now, even though production is showing strength in other regions of the nation.

The broiler industry must, he said, initiate better merchandising techniques.

Dixie-Portland Flour Sold to Memphis Firm

MEMPHIS—Assets of the Dixie-Portland Flour Co., Memphis, have been purchased by the Federal Compress & Warehouse Co., Memphis, which has formed a new subsidiary, Dixie-Portland Flour Mills, Inc., to operate the flour mills at Arkansas City, Kansas, and Chattanooga, Tenn., and the blending and bulk handling facilities at Memphis.

Except for Charles B. Stout, president of Dixie-Portland, who is retiring, the same personnel will operate the new Dixie-Portland Flour Mills, Inc.

The transaction does not include the flour mill at Higginsville, Mo., which has not been operating recently, nor the other grain elevator properties at Richmond, Va., where the company formerly operated a mill.

The consideration involved in the sale is approximately 43,000 shares of stock in Federal Compress and $1 million in cash. In addition, cash payment will be made for accounts receivable and inventory.

Federal Compress is a major operator of cotton compress and warehousing facilities throughout the South and Southwest, and it also owns some grain elevator properties and cottonseed mills.

Installs Pellet Mill

FOREST LAKE, MINN.—A $50,000 pelleting plant designed to produce up to 12 tons of pelleted feeds per hour is being installed by the E. J. Houle Co. here. The installation will be housed in an addition to the Houle elevator buildings. William Houle, a partner in the firm, said that with the new facilities the company could potentially handle twice the present volume at no increase in operating costs.

MARKETS

(Continued from page 2)

ice reports substantially lower prices were paid last week for cattle and lambs and slightly lower for hogs. The latest government report shows placements of broilers in Georgia at 7,053,000, which is down 102,000 from the previous week. North Georgia broiler prices last week ranged from 14¢ to 15¢ lb., mostly 14½¢, which caused the broiler operations to continue on a loss basis. In Florida, it is reported that some growers are selling their flocks of hens, as the returns that they realize from eggs will not pay the feed bill.

There has been a good demand this week for corn, although prices remained unchanged at $1.47@1.48 bu. delivered the Atlanta-Gainesville area. This is being done mostly by truckers returning from the Midwest.

Demand continues to remain good in Florida for citrus pulp, with very little moving to the New England states, due to the increases in prices. There will be practically no demand for citrus molasses until the latter part of July and August, when many of the ranchers will commence cattle feeding operations.

Central States

A canvass of commercial feed manufacturers presents a somewhat mixed picture as of June 3. Some are reporting a further slight falling off in their volume of sales. Others say that they are enjoying a fairly steady seasonal demand, and still others advise of a somewhat erratic situation.

Pastures in the midwestern area have probably never been in better shape as of June 1 with the combination of considerable moisture and the absence of any scorching temperatures resulting in very lush growth . . . and this in turn naturally has acted as a damper on cattle feed sales. On the other hand, call for hog feeds seems to be uniformly good.

As far as poultry feeds are concerned, there is room for improvement in order to bring the demand up to what the trade likes to look upon as normal, but with the current broiler and egg price situations what they are, the draggy demand now being experienced is a logical expectation.

The very recent turn-about in the price structures of various of the constituent feeds might be the signal for at least a modest revival in the call for commercial mixed feeds, in the opinion of some in the trade.

Ohio Valley

Spring weather swept into the Ohio Valley this week in a brilliantly sunny blaze of 80° temperatures that attracted herds and flocks to pastures, where thick grasses were providing large amounts of feed. As a result, naturally, formula feeds were in declining demand, even for such steady consumers as the pigs and piglets.

Human consumer demands likewise seemed to be affected by the long-delayed summer temperatures. As area stockyards reported sales of cattle and hogs on the sluggish side, wholesale markets for eggs and poultry noted that prices were unchanged to ½@1¢ lower, "with supplies and offerings adequate for light demands."

Area manufacturers have been anticipating the present lower demands for virtually all types of prepared feeds, but it is expected that as soon as the farmers have completed their spring plowing and planting activities, they will be devoting more attention to their farm animals, with some resultant improvement in sales of formula feeds.

Mountain States

Most feed men said the past week's sales volume has been down from the previous week. It is about even with this time a year ago.

Feeds that have been getting the most demand in the past week are drylot cattle feeds, but the demand has been almost the same as the previous week.

Most of the feeds purchased by the dealers is for immediate sale.

Pacific Northwest

A weak to lower trend continued to prevail during the week's Pacific Northwest feedstuffs market trading.

Wheat millfeeds led the downward feed ingredient price trend at Portland-Seattle by dropping $2 ton to the lowest point since last October.

Cottonseed meal prices were also down $2 ton at the close while meat and bone meal listings closed $1.50 ton with feed barley values off 50¢ to $1 ton. Other feed grains and concentrates held steady to firm at most quarters.

Trading as a whole was on the slow side with mixers reporting that demand lagged under hand-to-mouth buying on their part and on the part of livestock and poultry feeders.

Unfavorable feeding ratios are listed as an important factor in restricting buying as were improved pasture and range conditions throughout most Pacific Northwest sections.

Formula feed business was listed as being only fair at most quarters.

Hay market observers at Portland report that there was little change in the Pacific Northwest alfalfa price situation.

Hay cutting was delayed at the week's start by wet weather, but sunny weather prevailed at the close and harvesting operations were resumed.

Quotations for choice steers declined 25 to 50¢ at North Portland where they finished within a $29.25-29.75 cwt. range.

Producer paying prices for farm eggs followed a mixed trend at Portland and Seattle where AA large listings were 2¢ higher with A large eggs selling 1¢ higher. Prices for mediums held unchanged and values for all grades of smalls were 1¢ lower.

The breeder turkey market was unchanged for A grade hens while producers received 1¢ lb. more for toms as the result of a strong institutional demand for the big birds.

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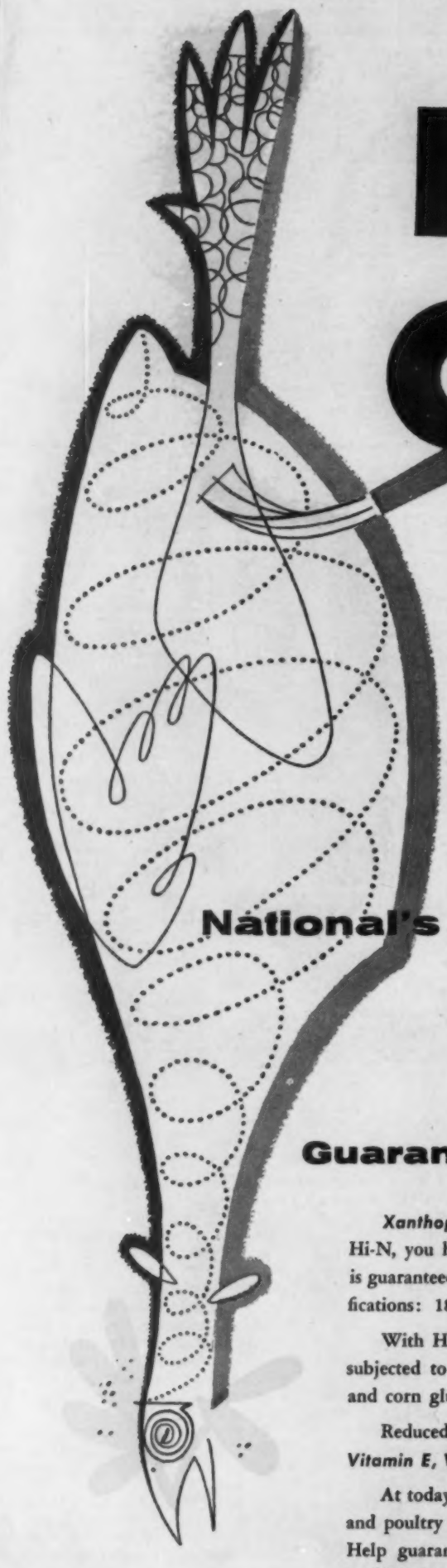

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